

AMERICAN NURSERYMAN

The Nurseryman's Forte: To Make America More Beautiful and Fruitful

JANUARY 15, 1950

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Picea Glauca Conica

SEEDS TREE—SHRUB—PERENNIAL HERBST BROTHERS
FLOWER—VEGETABLE—GRASS 92 Warren St., New York 7, N. Y.

Correspondence with seed collectors and growers invited.

Free catalog "Seeds for Nurserymen."

ORNAMENTAL SHRUBS

Our shrubs are well grown, bushy stock, with plenty of canes and grown in wide rows to insure specimen plants suitable for your critical retail and landscape trade. Consult our Fall Wholesale Trade List in which we offer a large assortment. Our Spring Wholesale Bulletin will be in the mail about February 1.

	Per 100	Cornus	Racemosa	Per 100	Lilac	Josikaea	Per 100	Staphylea	Trifolia	Per 100
Acanthopanax Sieboldianus	\$18.00	2 to 3 ft.	\$40.00	18 to 24 ins.	\$35.00	18 to 24 ins.	\$30.00	18 to 24 ins.	\$30.00	18 to 24 ins.
12 to 18 ins.	22.00	2 to 4 ft.	50.00	2 to 3 ft.	45.00	2 to 3 ft.	40.00	2 to 3 ft.	40.00	2 to 3 ft.
18 to 24 ins.	30.00	3 to 4 ft.		3 to 4 ft.	45.00	3 to 4 ft.	50.00	3 to 4 ft.	50.00	3 to 4 ft.
2 to 3 ft.	40.00	Deutzia	Pride of Rochester	18.00	18 to 24 ins.	45.00	18 to 24 ins.	16.00	18 to 24 ins.	16.00
3 to 4 ft.		2 to 3 ft.		25.00	2 to 3 ft.	60.00	2 to 3 ft.	22.00	2 to 3 ft.	22.00
2 to 3 ft.	45.00	3 to 4 ft.		35.00	3 to 4 ft.	60.00	3 to 4 ft.	30.00	3 to 4 ft.	30.00
3 to 4 ft.		Elaeagnus	Angustifolia	45.00	18 to 18 ins.	30.00	18 to 24 ins.	30.00	18 to 24 ins.	30.00
Almond, Pink-flowering	50.00	3 to 4 ft.		55.00	18 to 24 ins.	40.00	2 to 3 ft.	40.00	2 to 3 ft.	40.00
2 to 3 ft.		5 to 6 ft.		65.00	18 to 24 ins.	40.00	3 to 4 ft.	50.00	3 to 4 ft.	50.00
3 to 4 ft.		Euonymus	Yedoensis	12 to 18 ins.	20.00	18 to 24 ins.	35.00	18 to 24 ins.	16.00	18 to 24 ins.
12 to 18 ins.	10.00	19 to 24 ins.		30.00	18 to 24 ins.	40.00	2 to 3 ft.	25.00	2 to 3 ft.	25.00
18 to 24 ins.	15.00	2 to 3 ft.		40.00	18 to 24 ins.	40.00	3 to 4 ft.	32.00	3 to 4 ft.	35.00
2 to 3 ft.	20.00	Deutzia	Pride of Rochester	18.00	18 to 24 ins.	45.00	18 to 24 ins.	22.00	18 to 24 ins.	22.00
3 to 4 ft.	25.00	2 to 3 ft.		22.00	18 to 24 ins.	40.00	2 to 3 ft.	30.00	2 to 3 ft.	30.00
Althaea Anemoneaeflora, Ardens,	12 to 18 ins.	3 to 4 ft.		30.00	18 to 24 ins.	40.00	3 to 4 ft.	40.00	18 to 24 ins.	40.00
Boule de Feu, Double	15.00	4 to 5 ft.		40.00	18 to 24 ins.	40.00	4 to 5 ft.	50.00	18 to 24 ins.	50.00
Purple, Jeanne d'Arc, Lucy,	20.00	5 to 6 ft.		50.00	18 to 24 ins.	40.00	5 to 6 ft.	60.00	18 to 24 ins.	60.00
Rubis	25.00	Euonymus	Yedoensis	12 to 18 ins.	20.00	18 to 24 ins.	35.00	18 to 24 ins.	16.00	18 to 24 ins.
12 to 18 ins.	10.00	19 to 24 ins.		30.00	18 to 24 ins.	40.00	2 to 3 ft.	25.00	2 to 3 ft.	25.00
18 to 24 ins.	15.00	2 to 3 ft.		40.00	18 to 24 ins.	40.00	3 to 4 ft.	32.00	3 to 4 ft.	35.00
2 to 3 ft.	20.00	Deutzia	Pride of Rochester	18.00	18 to 24 ins.	45.00	18 to 24 ins.	22.00	18 to 24 ins.	22.00
3 to 4 ft.	25.00	2 to 3 ft.		22.00	18 to 24 ins.	40.00	2 to 3 ft.	30.00	2 to 3 ft.	30.00
Barberry, Thunbergi	35.00	3 to 4 ft.		30.00	18 to 24 ins.	40.00	3 to 4 ft.	40.00	18 to 24 ins.	40.00
9 to 12 ins.	9.00	18 to 24 ins.		40.00	18 to 24 ins.	40.00	4 to 5 ft.	50.00	18 to 24 ins.	50.00
12 to 15 ins.	12.00	2 to 3 ft.		50.00	18 to 24 ins.	40.00	5 to 6 ft.	60.00	18 to 24 ins.	60.00
15 to 18 ins.	14.00	3 to 4 ft.		60.00	18 to 24 ins.	40.00	6 to 7 ft.	70.00	18 to 24 ins.	70.00
18 to 24 ins.	20.00	Deutzia	Pride of Rochester	18.00	18 to 24 ins.	45.00	7 to 8 ft.	80.00	18 to 24 ins.	80.00
2 to 2½ ft.	22.00	2 to 3 ft.		22.00	18 to 24 ins.	40.00	8 to 9 ft.	90.00	18 to 24 ins.	90.00
2 to 2½ ft.	25.00	3 to 4 ft.		30.00	18 to 24 ins.	40.00	9 to 10 ft.	100.00	18 to 24 ins.	100.00
Barberry, Box	35.00	4 to 5 ft.		40.00	18 to 24 ins.	40.00	10 to 12 ft.	110.00	18 to 24 ins.	110.00
9 to 12 ins.	18.00	18 to 24 ins.		50.00	18 to 24 ins.	40.00	12 to 14 ft.	130.00	18 to 24 ins.	130.00
12 to 15 ins.	25.00	2 to 3 ft.		60.00	18 to 24 ins.	40.00	13 to 15 ft.	140.00	18 to 24 ins.	140.00
15 to 18 ins.	30.00	3 to 4 ft.		70.00	18 to 24 ins.	40.00	14 to 16 ft.	150.00	18 to 24 ins.	150.00
18 to 24 ins.	32.00	4 to 5 ft.		80.00	18 to 24 ins.	40.00	15 to 17 ft.	160.00	18 to 24 ins.	160.00
2 to 2½ ft.	45.00	5 to 6 ft.		90.00	18 to 24 ins.	40.00	16 to 18 ft.	170.00	18 to 24 ins.	170.00
Barberry, Truehedge	45.00	6 to 7 ft.		100.00	18 to 24 ins.	40.00	17 to 19 ft.	180.00	18 to 24 ins.	180.00
15 to 18 ins.	30.00	7 to 8 ft.		110.00	18 to 24 ins.	40.00	18 to 20 ft.	190.00	18 to 24 ins.	190.00
18 to 24 ins.	37.00	8 to 9 ft.		120.00	18 to 24 ins.	40.00	19 to 21 ft.	200.00	18 to 24 ins.	200.00
2 to 2½ ft.	45.00	9 to 10 ft.		130.00	18 to 24 ins.	40.00	20 to 22 ft.	210.00	18 to 24 ins.	210.00
Buckthorn, Cathartica	45.00	10 to 12 ft.		140.00	18 to 24 ins.	40.00	21 to 23 ft.	220.00	18 to 24 ins.	220.00
12 to 18 ins.	9.00	12 to 15 ft.		150.00	18 to 24 ins.	40.00	22 to 24 ft.	230.00	18 to 24 ins.	230.00
18 to 24 ins.	12.00	15 to 18 ft.		160.00	18 to 24 ins.	40.00	23 to 25 ft.	240.00	18 to 24 ins.	240.00
2 to 3 ft.	18.00	18 to 21 ft.		170.00	18 to 24 ins.	40.00	24 to 26 ft.	250.00	18 to 24 ins.	250.00
3 to 4 ft.	30.00	21 to 24 ft.		180.00	18 to 24 ins.	40.00	25 to 28 ft.	260.00	18 to 24 ins.	260.00
Buddleia Charming	20.00	24 to 27 ft.		190.00	18 to 24 ins.	40.00	26 to 29 ft.	270.00	18 to 24 ins.	270.00
Medium	25.00	27 to 30 ft.		200.00	18 to 24 ins.	40.00	27 to 30 ft.	280.00	18 to 24 ins.	280.00
No. 1	25.00	30 to 33 ft.		210.00	18 to 24 ins.	40.00	28 to 31 ft.	290.00	18 to 24 ins.	290.00
Buddleia Dubonnet	18.00	33 to 36 ft.		220.00	18 to 24 ins.	40.00	29 to 32 ft.	300.00	18 to 24 ins.	300.00
Medium	22.00	36 to 42 ft.		230.00	18 to 24 ins.	40.00	30 to 34 ft.	310.00	18 to 24 ins.	310.00
No. 1	22.00	42 to 48 ft.		240.00	18 to 24 ins.	40.00	31 to 35 ft.	320.00	18 to 24 ins.	320.00
Buddleia Fortune	18.00	48 to 54 ft.		250.00	18 to 24 ins.	40.00	32 to 36 ft.	330.00	18 to 24 ins.	330.00
(Pat. No. 206)	22.00	54 to 60 ft.		260.00	18 to 24 ins.	40.00	33 to 37 ft.	340.00	18 to 24 ins.	340.00
No. 1	30.00	60 to 72 ft.		270.00	18 to 24 ins.	40.00	34 to 38 ft.	350.00	18 to 24 ins.	350.00
Buddleia Ile de France	18.00	72 to 84 ft.		280.00	18 to 24 ins.	40.00	35 to 40 ft.	360.00	18 to 24 ins.	360.00
Medium	18.00	84 to 96 ft.		290.00	18 to 24 ins.	40.00	36 to 42 ft.	370.00	18 to 24 ins.	370.00
No. 1	22.00	96 to 112 ft.		300.00	18 to 24 ins.	40.00	37 to 44 ft.	380.00	18 to 24 ins.	380.00
Buddleia Orchid Beauty	22.00	112 to 128 ft.		310.00	18 to 24 ins.	40.00	38 to 46 ft.	390.00	18 to 24 ins.	390.00
Medium	28.00	128 to 144 ft.		320.00	18 to 24 ins.	40.00	39 to 48 ft.	400.00	18 to 24 ins.	400.00
No. 1	28.00	144 to 160 ft.		330.00	18 to 24 ins.	40.00	40 to 52 ft.	410.00	18 to 24 ins.	410.00
Buddleia Burgundy	Per 100	160 to 176 ft.		340.00	18 to 24 ins.	40.00	41 to 56 ft.	420.00	18 to 24 ins.	420.00
No. 1	\$35.00	176 to 192 ft.		350.00	18 to 24 ins.	40.00	42 to 60 ft.	430.00	18 to 24 ins.	430.00
Buddleia Empire Blue	(Pat. No. 557)	192 to 208 ft.		360.00	18 to 24 ins.	40.00	43 to 64 ft.	440.00	18 to 24 ins.	440.00
No. 1	35.00	208 to 224 ft.		370.00	18 to 24 ins.	40.00	44 to 68 ft.	450.00	18 to 24 ins.	450.00
Buddleia Pink Dawn	35.00	224 to 240 ft.		380.00	18 to 24 ins.	40.00	45 to 72 ft.	460.00	18 to 24 ins.	460.00
No. 1	35.00	240 to 256 ft.		390.00	18 to 24 ins.	40.00	46 to 76 ft.	470.00	18 to 24 ins.	470.00
Buddleia Royal Red	(Pat. No. 556)	256 to 272 ft.		400.00	18 to 24 ins.	40.00	47 to 80 ft.	480.00	18 to 24 ins.	480.00
No. 1	35.00	272 to 288 ft.		410.00	18 to 24 ins.	40.00	48 to 84 ft.	490.00	18 to 24 ins.	490.00
Buddleia Snowbank	35.00	288 to 304 ft.		420.00	18 to 24 ins.	40.00	49 to 88 ft.	500.00	18 to 24 ins.	500.00
No. 1	35.00	304 to 320 ft.		430.00	18 to 24 ins.	40.00	50 to 92 ft.	510.00	18 to 24 ins.	510.00
Buddleia White Bouquet	(Pat. No. 536)	320 to 336 ft.		440.00	18 to 24 ins.	40.00	51 to 96 ft.	520.00	18 to 24 ins.	520.00
No. 1	40.00	336 to 352 ft.		450.00	18 to 24 ins.	40.00	52 to 100 ft.	530.00	18 to 24 ins.	530.00
Cornus Alba Sibirica	Per 100	100 to 116 ft.		460.00	18 to 24 ins.	40.00	53 to 104 ft.	540.00	18 to 24 ins.	540.00
2 to 3 ft.	\$30.00	116 to 132 ft.		470.00	18 to 24 ins.	40.00	54 to 112 ft.	550.00	18 to 24 ins.	550.00
3 to 4 ft.	40.00	132 to 148 ft.		480.00	18 to 24 ins.	40.00	55 to 120 ft.	560.00	18 to 24 ins.	560.00
4 to 5 ft.	55.00	148 to 164 ft.		490.00	18 to 24 ins.	40.00	56 to 128 ft.	570.00	18 to 24 ins.	570.00
Cornus Goldentwig	18 to 24 ins.	164 to 180 ft.		500.00	18 to 24 ins.	40.00	57 to 136 ft.	580.00	18 to 24 ins.	580.00
18 to 24 ins.	22.00	180 to 196 ft.		510.00	18 to 24 ins.	40.00	58 to 144 ft.	590.00	18 to 24 ins.	590.00
2 to 3 ft.	30.00	196 to 212 ft.		520.00	18 to 24 ins.	40.00	59 to 152 ft.	600.00	18 to 24 ins.	600.00
3 to 4 ft.	40.00	212 to 228 ft.		530.00	18 to 24 ins.	40.00	60 to 160 ft.	610.00	18 to 24 ins.	610.00
Lilac, Common White	18 to 24 ins.	228 to 244 ft.		540.00	18 to 24 ins.	40.00	61 to 168 ft.	620.00	18 to 24 ins.	620.00
18 to 24 ins.	40.00	244 to 260 ft.		550.00	18 to 24 ins.	40.00	62 to 176 ft.	630.00	18 to 24 ins.	630.00
Lilac, Common Purple	18 to 24 ins.	260 to 276 ft.		560.00	18 to 24 ins.	40.00	63 to 184 ft.	640.00	18 to 24 ins.	640.00
18 to 24 ins.	45.00	276 to 292 ft.		570.00	18 to 24 ins.	40.00	64 to 192 ft.	650.00	18 to 24 ins.	650.00
Lilac, Common White	18 to 24 ins.	292 to 308 ft.		580.00	18 to 24 ins.	40.00	65 to 200 ft.	660.00	18 to 24 ins.	660.00
18 to 24 ins.	40.00	308 to 324 ft.		590.00	18 to 24 ins.	40.00	66 to 208 ft.	670.00	18 to 24 ins.	670.00
Lilac, Common Purple	18 to 24 ins.	324 to 340 ft.		600.00	18 to 24 ins.	40.00	67 to 216 ft.	680.00	18 to 24 ins.	680.00
18 to 24 ins.	45.00	340 to 356 ft.		610.00	18 to 24 ins.	40.00	68 to 224 ft.	690.00	18 to 24 ins.	690.00
Lilac, Common White	18 to 24 ins.	356 to 372 ft.		620.00	18 to 24 ins.	40.00	69 to 232 ft.	700.00	18 to 24 ins.	700.00
18 to 24 ins.	40.00	372 to 388 ft.		630.00	18 to 24 ins.	40.00	70 to 240 ft.	740.00	18 to 24 ins.	740.00
Lilac (Chinese), Rhamnagensis	18 to 24 ins.	388 to 404 ft.		640.00	18 to 24 ins.	40.00	71 to 248 ft.	750.00	18 to 24 ins.	750.00
18 to 24 ins.	35.00	404 to 420 ft.		650.00	18 to 24 ins.	40.00	72 to 256 ft.	760.00	18 to 24 ins.	760.00
2 to 3 ft.	35.00	420 to 436 ft.		660.00	18 to 24 ins.	40.00	73 to 264 ft.	770.00	18 to 24 ins.	770.00
3 to 4 ft.	45.00	436 to 452 ft.		670.00	18 to 24 ins.	40.00	74 to 272 ft.	780.00	18 to 24 ins.	780.00
4 to 5 ft.	60.00	452 to 468 ft.		680.00	18 to 24 ins.	40.00	75 to 280 ft.	790.00	18 to 24 ins.	790.00
Lilac, Common Purple	18 to 24 ins.	468 to 484 ft.		690.00	18 to 24 ins.	40.00	76 to 288 ft.	800.00	18 to 24 ins.	800.00
18 to 24 ins.	45.00	484 to 500 ft.		700.00	18 to 24 ins.	40				

AMERICAN NURSERYMAN

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The Nurseryman's Forte: To Make America More Beautiful and Fruitful

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Forms for the February 1 issue will close Friday, January 20.

Mail copy to arrive at Chicago by that date—no later!

C. L. VANDERBROOK & SON Manchester, Conn.

QUALITY MERCHANDISE AT REASONABLE PRICES

ACTUAL GRADE COUNTS ON ALL WAREHOUSE STOCK

All prices subject to change without notice. Boxing or baling additional. TERMS: 2 per cent 10 days, net 30 days. Interest at 6 per cent on delinquent accounts.

EVERGREENS

These can be shipped **INSIDE** the Japanese Beetle area **ONLY**.

	Each	Each	
25 Juniper, Irish, 5 ft.	\$2.50	1290 <i>Taxus Cupidata</i> , 15 to 18 ins.	\$2.00
25 Juniper, Irish, 3 ft.	1.75	25 <i>Taxus Cupidata</i> , Nano, Dwarf, 12 to 18 ins.	2.25
4 Juniper, Stricta, 2 to 3 ft.	2.00	66 <i>Taxus Cupidata</i> , Upright Columnar, 2 to 3 ft.	2.75
6 Juniper, Stricta, 18 to 24 ins.	1.50	196 <i>Taxus Cupidata</i> , Upright Columnar, 18 to 24 ins.	2.50
50 <i>Taxus Baccata</i> , 18 to 24 ins.	2.50	250 <i>Taxus Cupidata</i> , Upright Columnar, 18 ins.	2.00
200 <i>Taxus Brevifolia</i> , 18 ins.	2.00	96 <i>Taxus Media Hatfieldi</i> , 12 to 18 ins.	2.00
22 <i>Taxus Brevifolia</i> , 18 ins.	3.00	54 <i>Taxus Sieboldii</i> , 18 ins.	2.50
100 <i>Taxus Brevifolia</i> , 12 to 18 ins.	2.50	75 <i>Thuja Vervainacea</i> , 3 to 4 ft.	3.00
180 <i>Taxus Capitata</i> , 18 to 24 ins.	3.75		

ORNAMENTAL TREES

	Each	Each	
1 Birch, Columnaris, 6 to 8 ft.	\$2.50	14 Birch, Columnaris, 5 to 6 ft.	\$2.00

Salix Babylonica—See listing under shrubs.

CHECK THESE SPECIALS

	Each	Each	
7 Climbing Rose Dorothy Perkins, No. 1	\$0.15	700 <i>Retinospora Plumosa Aurea</i> , 3-yr., lining-out,	
5 <i>Hex Verticillata</i> , 6 to 8 ft.	3.00	6 to 12 ins.	80.30
100 <i>Retinospora Plumosa</i> , 3-yr., lining-out, 6 to 12 ins.	.25	Weeping Willows—see <i>Salix Babylonica</i> listing under Shrubs.	

ROSA MULTIFLORA JAPONICA

Budding Stock	Per 1000	Conservation Grades	Per 1000
3 to 4 mm.	\$25.00	8 to 15 ins., 1 to 3 mm.	\$20.00
4 to 6 mm.	32.00	12 ins. and over, 4 to 12 mm.	30.00
6 to 8 mm.	38.00	Write for special quantity prices in both grades.	

FAMOUS CONNECTICUT VALLEY-GROWN BARBERRY SEEDLINGS

Barberry Thunbergi, 2-yr., not transplanted Stocky seedlings—Can be used in place of 1-yr. seedlings.	GREEN-LEAVED	Per 1000	RED-LEAVED	Per 1000
14,800 12 to 18 ins.		\$20.00	134 12 to 18 ins.	\$30.00
33,600 9 to 12 ins.		10.00	550 9 to 12 ins.	.04
68,500 6 to 9 ins.		7.00	700 6 to 9 ins.	.06
			550 3 to 6 ins.	.05
			6 <i>Loniceria Heckrottii</i> , No. 1	.30
			9 <i>Loniceria Heckrottii</i> , No. 2	.25
			33 <i>Loniceria Morrowi</i> , 3 to 4 ft.	.30
			29 <i>Loniceria Morrowi</i> , 2 to 3 ft.	.25
			16 <i>Loniceria Morrowi</i> , 18 to 24 ins.	.20
			50 <i>Loniceria Rubra</i> , 3 to 4 ft.	.30
			180 <i>Loniceria Tat. Rubra</i> , 2 to 3 ft.	.25
			40 <i>Loniceria Tat. Rubra</i> , 18 to 24 ins.	.09
			16 <i>Loniceria Tat. Rubra</i> , 12 to 18 ins.	.15
			43 <i>Philadelphus Grandiflorus</i> , 3 to 4 ft.	.25
			123 <i>Philadelphus Grandiflorus</i> , 2 to 3 ft.	.20
			180 <i>Philadelphus Grandiflorus</i> , 18 to 24 ins.	.15
			50 <i>Philadelphus Grandiflorus</i> , 12 to 18 ins.	.10
			2665 <i>Philadelphus Virginiana</i> , 18 to 24 ins.	.30
			4150 <i>Philadelphus Virginiana</i> , 12 to 18 ins.	.22
			44 <i>Rosa rugosa</i> , 2 to 3 ft.	.30
			725 <i>Salix Babylonica</i> , 2 to 3 ft.	.60
			1525 <i>Salix Babylonica</i> (True), 3 to 4 ft.	.45
			1138 <i>Salix Babylonica</i> (true), 2 to 3 ft.	.35
			500 <i>Salix Babylonica</i> , 18 to 24 ins.	.25
			6 <i>Sambucus nigra</i> , 3 to 8 ft.	.30
			21 <i>Spiraea Anthony Waterer</i> , 9 to 12 ins.	.15
			289 <i>Spiraea Froeheli</i> , 18 to 24 ins.	.25
			16 <i>Spiraea Trichocarpa</i> , 18 to 24 ins.	.20
			40 <i>Spiraea Vanhouttei</i> , 12 to 18 ins.	.15
			12 <i>Stephanandra Flexuosa</i> , 18 to 24 ins.	.25
			11 <i>Stephanandra Flexuosa</i> , 12 to 18 ins.	.20
			80 <i>Symphoricarpos Chenaultii</i> , 2 to 3 ft.	.25
			68 <i>Symphoricarpos Chenaultii</i> , 18 to 24 ins.	.20
			25 <i>Symphoricarpos Chenaultii</i> , 12 to 18 ins.	.15
			25 <i>Symphoricarpos Racemosus</i> , 18 to 24 ins.	.20
			183 <i>Symphoricarpos Vulsinaria</i> , 2 to 3 ft.	.25
			156 <i>Symphoricarpos Vulsinaria</i> , 18 to 24 ins.	.20
			15 <i>Symphoricarpos Vulsinaria</i> , 12 to 18 ins.	.15
			10 <i>Syringa Vulgaris</i> , 18 to 24 ins.	.30
			45 <i>Syringa Vulgaris</i> , 12 to 18 ins.	.25
			30 <i>Tamarix Amurensis</i> , 3 to 4 ft.	.30
			6 <i>Viburnum Americanum</i> , 18 to 24 ins.	.20
			7 <i>Viburnum Americanum</i> , 12 to 18 ins.	.15
			20 <i>Viburnum Americanum</i> , 9 to 12 ins.	.10
			100 <i>Viburnum Dentatum</i> , 18 to 24 ins.	.20
			136 <i>Viburnum Dentatum</i> , 12 to 18 ins.	.15
			33 <i>Viburnum Opulus</i> , 9 to 12 ins.	.10
			10 <i>Viburnum Tomentosum</i> , 18 to 24 ins.	.25
			56 <i>Weigela Rosa</i> , 3 to 4 ft.	.40
			50 <i>Weigela Rosa</i> , 2 to 3 ft.	.30
			20 <i>Weigela Rosa</i> , 18 to 24 ins.	.25
			4 <i>Wistaria Sinensis</i> , No. 1	.25
			22 <i>Wistaria Sinensis</i> , No. 2	.20

2-YEAR, FIELD-GROWN SHRUBS and VINES

	Each		Each
6 <i>Actinidia Arguta</i> , No. 1	\$0.35	453 <i>Ligustrum, California</i> , 18 to 24 ins.	\$0.05
60 <i>Akebia Quinata</i> , No. 1	.35	525 <i>Ligustrum, California</i> , 12 to 18 ins.	.04
27 <i>Akebia Quinata</i> , No. 2	.30	1345 <i>Ligustrum Ibolium</i> , 18 to 24 ins.	.06
50 <i>Almond, Pink</i> , 3 to 4 ft.	.50	3010 <i>Ligustrum Ibolium</i> , 12 to 18 ins.	.05
400 <i>Almond, Pink</i> , 2 to 3 ft.	.40	6 <i>Loniceria Heckrottii</i> , No. 1	.30
418 <i>Almond, Pink</i> , 18 to 24 ins.	.30	9 <i>Loniceria Heckrottii</i> , No. 2	.25
207 <i>Almond, Pink</i> , 12 to 18 ins.	.25	29 <i>Loniceria Morrowi</i> , 2 to 3 ft.	.25
5 <i>Almond, White</i> , 3 to 4 ft.	.50	16 <i>Loniceria Morrowi</i> , 18 to 24 ins.	.20
26 <i>Almond, White</i> , 2 to 3 ft.	.40	50 <i>Loniceria Rubra</i> , 3 to 4 ft.	.30
6 <i>Almond, White</i> , 18 to 24 ins.	.30	180 <i>Loniceria Tat. Rubra</i> , 2 to 3 ft.	.25
218 <i>Ampelopsis Quinquefolia</i> , No. 1	.20	40 <i>Loniceria Tat. Rubra</i> , 18 to 24 ins.	.09
100 <i>Ampelopsis Quinquefolia</i> , No. 2	.15	16 <i>Loniceria Tat. Rubra</i> , 12 to 18 ins.	.15
360 <i>Ampelopsis Veitchii</i> , 2 to 3 ft.	.30	43 <i>Philadelphus Grandiflorus</i> , 3 to 4 ft.	.25
825 <i>Amelanchier Veltchii</i> , 18 to 24 ins.	.25	123 <i>Philadelphus Grandiflorus</i> , 2 to 3 ft.	.20
46 <i>Aralia Pentaphylla</i> , 3 to 4 ft.	.25	180 <i>Philadelphus Grandiflorus</i> , 18 to 24 ins.	.15
70 <i>Aralia Pentaphylla</i> , 2 to 3 ft.	.20	50 <i>Philadelphus Grandiflorus</i> , 12 to 18 ins.	.10
27 <i>Aralia Pentaphylla</i> , 18 to 24 ins.	.15	2665 <i>Philadelphus Virginiana</i> , 18 to 24 ins.	.30
50 <i>Aralia Pentaphylla</i> , 12 to 18 ins.	.10	4150 <i>Philadelphus Virginiana</i> , 12 to 18 ins.	.22
1510 <i>Berberis Thunbergi</i> , 3-yr. F.G., 12 to 18 ins.	.15	725 <i>Rosa rugosa</i> , 2 to 3 ft.	.30
1550 <i>Berberis Thunbergi</i> , 3-yr. F.G., 9 to 12 ins.	.08	1525 <i>Salix Babylonica</i> (true), 3 to 4 ft.	.45
16 <i>Buddleia Davidii</i> , No. 1	.15	1138 <i>Salix Babylonica</i> (true), 2 to 3 ft.	.35
10 <i>Celastrus scandens</i> , No. 2	.25	500 <i>Salix Babylonica</i> , 18 to 24 ins.	.25
20 <i>Clethra Alnifolia</i> , 18 to 24 ins.	.30	6 <i>Sambucus nigra</i> , 3 to 8 ft.	.30
3 <i>Clethra Alnifolia</i> , 12 to 18 ins.	.25	21 <i>Spiraea Anthony Waterer</i> , 9 to 12 ins.	.15
2 <i>Clethra Alnifolia</i> , 9 to 12 ins.	.15	289 <i>Spiraea Froeheli</i> , 18 to 24 ins.	.25
27 <i>Cornus Flav</i> , Lutea, 2 to 3 ft.	.25	16 <i>Spiraea Trichocarpa</i> , 18 to 24 ins.	.20
11 <i>Cornus Flav</i> , Lutea, 18 to 24 ins.	.20	40 <i>Spiraea Vanhouttei</i> , 12 to 18 ins.	.15
144 <i>Cornus Sibirica</i> , 2 to 3 ft.	.20	12 <i>Stephanandra Flexuosa</i> , 18 to 24 ins.	.25
64 <i>Cornus Sibirica</i> , 18 to 24 ins.	.15	11 <i>Stephanandra Flexuosa</i> , 12 to 18 ins.	.20
165 <i>Cornus Stolonifera</i> , 3 to 4 ft.	.25	80 <i>Symphoricarpos Chenaultii</i> , 2 to 3 ft.	.25
268 <i>Cornus Stolonifera</i> , 2 to 3 ft.	.20	68 <i>Symphoricarpos Chenaultii</i> , 18 to 24 ins.	.20
20 <i>Cornus Stolonifera</i> , 18 to 24 ins.	.15	25 <i>Symphoricarpos Chenaultii</i> , 12 to 18 ins.	.15
160 <i>Cyclonia Japonica</i> , 9 to 12 ins.	.15	25 <i>Symphoricarpos Racemosus</i> , 18 to 24 ins.	.20
119 <i>Forsythia Spectabilis</i> , 2 to 3 ft.	.20	183 <i>Symphoricarpos Vulsinaria</i> , 2 to 3 ft.	.25
264 <i>Forsythia Spectabilis</i> , 18 to 24 ins.	.15	156 <i>Symphoricarpos Vulsinaria</i> , 18 to 24 ins.	.20
10 <i>Forsythia Suspensa</i> , 3 to 4 ft.	.35	10 <i>Syringa Vulgaris</i> , 18 to 24 ins.	.30
45 <i>Forsythia Suspensa</i> , 18 to 24 ins.	.15	45 <i>Syringa Vulgaris</i> , 12 to 18 ins.	.25
1725 <i>Hydrangea A.G.</i> , 12 to 18 ins.	.20	30 <i>Tamarix Amurensis</i> , 3 to 4 ft.	.30
285 <i>Hydrangea P.G.</i> , 18 to 24 ins.	.35	6 <i>Viburnum Americanum</i> , 18 to 24 ins.	.20
166 <i>Hydrangea P.G.</i> , 12 to 18 ins.	.25	7 <i>Viburnum Americanum</i> , 12 to 18 ins.	.15
180 <i>Hydrangea P.G.</i> , 9 to 12 ins.	.20	20 <i>Viburnum Americanum</i> , 9 to 12 ins.	.10
12 <i>Kerria Japonica</i> , 12 to 18 ins.	.25	100 <i>Viburnum Dentatum</i> , 18 to 24 ins.	.20
690 <i>Ligustrum Amurensis</i> , 3 to 4 ft.	.13	136 <i>Viburnum Dentatum</i> , 12 to 18 ins.	.15
3080 <i>Ligustrum Amurensis</i> , 2 to 3 ft.	.12	33 <i>Viburnum Opulus</i> , 9 to 12 ins.	.10
1960 <i>Ligustrum Amurensis</i> , 18 to 24 ins.	.10	10 <i>Viburnum Tomentosum</i> , 18 to 24 ins.	.25
2625 <i>Ligustrum Amurensis</i> , 12 to 18 ins.	.05	56 <i>Weigela Rosa</i> , 3 to 4 ft.	.40
160 <i>Ligustrum California</i> , 3 to 4 ft.	.08	50 <i>Weigela Rosa</i> , 2 to 3 ft.	.30
550 <i>Ligustrum California</i> , 2 to 3 ft.	.06	20 <i>Weigela Rosa</i> , 18 to 24 ins.	.25

AMERICAN NURSERYMAN

F. R. KILNER, *Editor and Publisher*
Joan L. Kilner, *Assistant Editor*

Editorial

PICTURE WINDOWS.

Misapplications of architectural features have resulted in absurdities in home design in every generation. In the present, the picture window is an example. Originally it was a thing of joy and beauty for those whose dwellings looked out over mountains, valleys, seashore or lake, or some other view of scenic attraction. When the house is placed properly on the home grounds, the outlook through the picture window can be, or can be made, pleasurable to the eyes even if not scenically spectacular.

But when the picture window looks out upon an unattractive highway or the unadorned walls of another residence or something equally lacking in beauty or scenery, the feature is inappropriate, to say the least.

By the time the nurseryman or landscape contractor has been sought to plant the grounds, the house has become well advanced in construction and the picture window is in, regardless of its outlook. If the house is on a small lot or the lawn in front of the picture window is shallow, there is not much that can be done to remedy the blunder. But in some cases the outlook can be modified by the planting of suitable trees and shrubs to give a view through the picture window which has something of beauty the year around, despite the surroundings.

Much ingenuity and thought, as well as care in design and planting, will be needed if the nurseryman is to provide a picture for those windows which have none naturally. The number of them is likely to provide a challenge that should stimulate our designers and plantsmen.

WHY SEVERAL NAMES?

There was turmoil in the office of a wholesale nursery one day last month. A check had been received, and the signature on it was not to be found among the names on the firm's ledgers. None of the heads of the firm or the salesmen recognized the name at all. There was considerable chagrin, until a bright stenographer remembered she had seen that name in the correspondence of

The Mirror of the Trade

one of the firm's customers. So she saved the day, but in the subsequent investigation it was found that the customer operated under four different names, none of which was that signed to the check.

This case was unusual only because not all of the customer's trading names were known to the wholesale firm. Many small firms, and a few large ones, operate under more than one title. In the case of the large operators, one title may cover the retail business and the other the wholesale business; that is not uncommon and is understandable.

But the smaller the firms, it sometimes seems, the more names employed without rhyme or reason. John Jones, at Smithville, operates under his own name and also does business as the Jones Nursery and sometimes as the Smithville Nursery. For some reason, perhaps through buying out a competitor, he also operates the Highway Nursery. Why the variation is a question not easily answered.

Why not drop two or three of the names and concentrate on one firm name? It would certainly add dignity in local operations and add to a customer's importance in the wholesale trade.

Perhaps the retailer thinks that by preempting all the most appropriate titles for a nursery in his town he can divert competition. But long familiarity with nursery firm titles leads one to believe that the success or longevity of an enterprise is seldom affected by its name.

CREATING BUYING POWER.

So accustomed did we become, during a long war, to the government's manipulation of business and even living conditions that sometimes we unthinkingly accept the possibility of improving the economic situation by government fiscal policies, price controls and wage-hour laws.

The fact of the matter is that a country, like an individual, can only increase its buying power by actually delivering more in the way of services or merchandise to others. That means he has to learn through experience or skill to do a better job, or he must turn out more merchandise in a given time.

On the national scale, cutting hours of work and making many little dollars out of fewer big ones are not going to give the individual

better clothes to wear, more food to eat or a better house in which to live. Only by turning out more merchandise in those shorter hours are we even going to keep pace in our standard of living. To improve it, we must find ways actually to enlarge our output per hour.

In a recent address, this thought was put in concise phraseology by Harold G. Moulton, president of the Brookings Institute, one of the country's foremost economists, as follows: "Our future prosperity seems to depend very definitely upon our capacity to create additional buying power in the masses of consumers. This requires, of course, an intensification of technological progress, for increasing man-hour output constitutes the only foundation for higher standards of living. This increasing productivity must be accompanied by a constantly broadening distribution of national purchasing power through the medium of an ever-improving ratio of prices to wages. Unless the buying power of the masses, whose wants create markets, is progressively expanding, business management will have to be content with a virtually static condition. There is scant future in trying to sell more goods to the shrinking rich and middle classes, and the foreign outlets will shrink as export subsidies decline and imports increase."

SECRETARIES, PLEASE NOTE.

The practice seems to be increasing, in the printing of folders or booklets containing convention programs of state nurserymen's associations, to include a list of the firms holding membership. In some of these lists, the name of the owner or the principal officer follows the firm or corporate name. The secretaries who have gone to the extra trouble to make that addition have been commended, especially by newcomers or visitors from a distance to the convention. Listing the individual with the firm name makes identification quicker and acquaintanceship easier. Other secretaries would earn much good will by following the same practice.

LOCATED at North Bolton and Shirland avenues, Alexandria, La., Blair Nursery was opened last summer by Elbert L. Blair and C. R. Blair.

Chinese Chestnut Varieties

By Clarence A. Reed

"The greatest single advance the industry can make during the next 100 years will be in the improvement of its varieties" was the unqualified statement made some twenty-five years ago by Dr. U. P. Hedrick to southern pecan growers, when he was director of the New York agricultural experiment station, Geneva. He had just been introduced by Dr. T. H. McHatton, horticulturist at the University of Georgia, Athens, as being the man "whom I think is the world's greatest pomologist." The occasion was the annual convention of the National Pecan Growers' Association at Albany, Ga.

If you doubt the accuracy of Dr. Hedrick's statement, take a look about you. How long would you stay in business with the same varieties of apples, or any other fruit, that your father grew? As an example of progress, the tung nut, a much more recent arrival in southern horticulture than either the pecan in the south or the chestnut in the east, is forging ahead largely on the basis of varietal improvement, and the same can be true with other types of nuts. In pursuing the problem of improving varieties, there is equal need for one to be informed on how to propagate, how to sell and what sort of trees to plant. To help decide on the best varieties to plant, let us consider some of them one by one.

Abundance.

"Abundance is from seeds which I imported from China in the early thirties," wrote Carroll D. Bush, Grapeview, Wash., in November, 1945. "When the young trees were about 3 years old, I cut scions from those which were the most vigorous and had the finest form, and grafted ten or fifteen branches onto the top of a European chestnut, *Castanea sativa*." This branch was one of the first to bear and eventually became his choicest variety. However, on the Pacific coast the Chinese chestnut is not regarded with the high esteem accorded it in the east.

In 1941 Mr. Bush sold some Abundance trees to easterners in widely separated places. Among these were O. Filman, Aldershot, Ont.; Fayette Etter, Lemasters, Pa., and

E. C. Rice, Absher, Ky. That year the United States Department of Agriculture also purchased a few trees for its use at Beltsville, Md. However, Mr. Etter and Mr. Filman were several years ahead of all others in establishing Abundance in the east, for they had obtained scions of it in 1938 or 1939. From them and their trees, the variety was soon spread to the plantings of H. F. Stoke, Roanoke, Va., and Dr. J. Russell Smith, Swarthmore, Pa. A little later it was established at Oklahoma City, Okla., by A. G. Hirschi. Insofar as reports have been received, all trees of this variety have done well.

Mr. Filman says, "I have several varieties from Mr. Bush. Apparently what I have been calling Abundance is something else. But no matter, I have one or two good ones." He and Mr. Etter are comparing notes and will presently establish the correct identity of Abundance.

Mr. Stoke says, "I have never seen a nut that cleans better or that is better to eat. The nuts do not split when ripening."

Mr. Hirschi tells us that "For us in Oklahoma, it appears to be one of the best yet introduced. It has so far withstood our difficult climate, where there are frosts in the late spring and early fall and severe dry spells at any time of the year."

Mr. Etter has probably had more experience with Abundance than all other easterners combined. He has

grafted some 600 trees without a failure. He says it is a regular bearer, not overbearing one year and failing, or partly so, the next. The photograph reproduced on this page shows one tree which was grafted in 1940 and began bearing the next year. It increased its yield annually, with one exception, when the yield fell from eight pounds in 1944 to five pounds in 1945. The next year, only six years after grafting, the tree bore seventeen pounds of nuts. The range was from one-quarter pound in 1941 to twenty-five pounds in 1948. Its total for the eight seasons was seventy and one-quarter pounds.

The nuts ripen and fall free from the bur in two or three weeks' time. They are attractive in appearance, since they have almost no down over the surface and are uniform in size. In the 1945 crop nuts ranged from thirty-eight to sixty-six per pound and averaged fifty for the lot. There are usually three in a bur, with those in the middle rarely being objectionably small. Abundance is easily grafted and unites readily with almost any stock, although a Chinese variety of close relationship is most desirable. However, for nut production, the use of Japanese chestnut seedlings is not recommended under any circumstances.

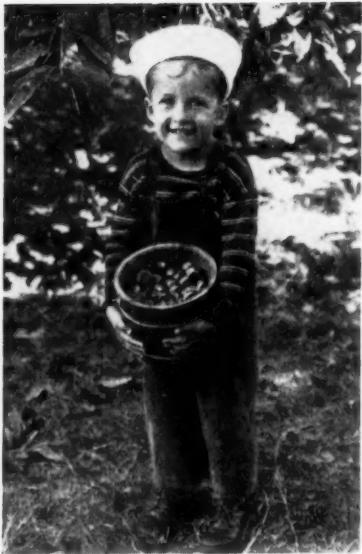
Carr.

The Carr chestnut originated as one of two seedlings sent by the



An Abundance Chinese chestnut tree belonging to Fayette Etter, Lemasters, Pa., 6 years old from the graft and bearing seventeen pounds of nuts.

Clarence A. Reed is collaborator, United States Department of Agriculture, bureau of plant industry, soils and agricultural engineering, Beltsville, Md.



Mike Hemming commends the Hemming variety to his progenitors.

United States Department of Agriculture to the late R. D. Carr, Magnolia, N. C., in 1915. Sample nuts so favorably impressed the department in 1930 that the variety was immediately named in Mr. Carr's honor, although its propagation was not begun until 1932, when it was first grafted by Mr. Stoke. Incidentally, this is believed to be the first instance of Chinese chestnut grafting in this country.

Later Carr became available from several nurseries. It was a strong grower, but its scions so often failed to be permanent that it has since been mostly abandoned. Grafted tops broke off within a few weeks to several years after being grafted at Beltsville, Md., and Albany, Ga. The variety is now carried by few nurserymen. Carr nuts are small in comparison with most of the later introductions, but in sweetness and cleaning quality, the variety is about all one could desire.

Colby (Illinois 31-4).

In 1931, Dr. A. S. Colby, of the department of horticulture, University of Illinois, Urbana, began hybridizing the chestnut by applying Chinese pollen to certain varieties of the European species grown by the family of the late E. A. Riehl, Godfrey, Ill. From the resulting seedlings, his No. 4, Fuller x mollissima, produced what Mr. Stoke, who has grown it for seventeen years, regards as the most outstanding chestnut that has ever come to his attention. The tree is remarkable for its beauty and vigor, and the nut is large and handsome.

With Mr. Stoke, Colby has been practically free from blight, and he is using his ingenuity to keep it so. However, Dr. Colby writes that the parent tree did not blight until the spring of 1948, when it became diseased and had to be cut down. It is here called Colby for the first time, and while Dr. Colby did not give his full approval, he did not say it should not be done.

Conard.

Conard was first listed in the fall, 1948, catalog of Dr. J. Russell Smith, Swarthmore, Pa., proprietor of Sunny Ridge Nursery, Round Hill, Va. He wrote, "Dr. H. S. Conard is a Philadelphia Quaker, who became the professor of botany at Grinnell College, Grinnell, Ia. He had two chestnut trees which withstood the terrific Armistice day blizzard of 1940, when the thermometer dropped from the temperatures of a warm sunny afternoon to 20 degrees below zero overnight. Several persons were frozen to death, and many apple trees were killed, but the chestnut trees came through in good shape.

"I think of it as the blizzard strain, but do not recommend it for any place except the extreme north, as it is probably not equal to other varieties. It is Chinese and bears reasonably well."

Dr. Conard wrote December 4, 1948, "My chestnut trees came from the division of plant exploration and introduction some twenty years ago. They are on the grounds of Grinnell College and do not properly belong to me, but no one else knows or cares anything about them.

"I cannot say when the first crops came in. The trees bear every year, and the nuts are ripe before frost. There are no other Chinese chestnuts known to be within fifty miles. I once sent specimens to Washington, D. C., and was told that they were inferior to other introductions. I hardly know when they ripen, since squirrels cut them off while they are still in the bur. I have sent scions and sample nuts to Dr. Smith and the Snyder brothers, Center Point, Ia."

The Conard variety probably should not be passed by too lightly, as we have yet to see a pure Chinese chestnut that is not good to eat at some stage of maturity. One that proves hardy under such conditions as Dr. Smith describes may prove useful in outlying districts.

Hemming.

Hemming is No. 16 in a row of nineteen trees sent by the United States Department of Agriculture to

Eastern Shore Nurseries, Inc., Easton, Md., of which Ernest Hemming is senior, silent partner.

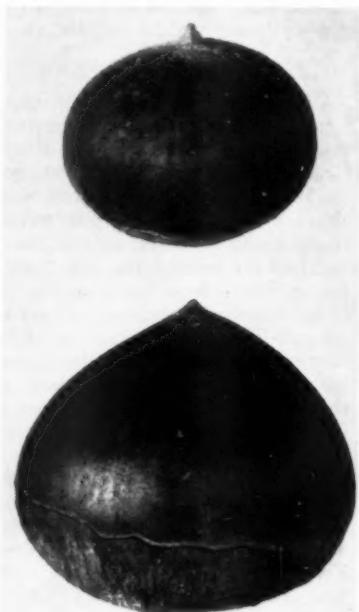
Mr. Stoke, who is one of the most valuable cooperators in nut matters with the United States Department of Agriculture, says, "I have one tree onto the top of which I grafted six scions, all of which made good unions.

"I think highly of this variety. Its chief faults lie in its tendency to variability in size and a tendency of occasional nuts to split open when ripe. Its quality is of the best, and the nut is of superb mahogany color. I hope the Hemmings will propagate it."

Hobson.

Hobson originated as one of two seedlings sent by the United States Department of Agriculture to a private grower, James Hobson, Jasper, Ga. It was named in his honor soon after the Carr variety received its name. Hobson was later taken up by nurserymen and was widely distributed for several years. It has much to commend it, since it is precocious, prolific, annual in bearing, and the nuts are sweet. The cleaning quality also is good, but the nuts are too small to meet requirements of harvesting and marketing. The variety lost favor and is now propagated by few nurserymen. It is, however, too good for home use to abandon. Mr. Stoke says it is entitled to a better break than it has received. Dr. Smith

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Typical Chinese chestnut above and typical Japanese chestnut below.

Hardiness of Nursery Stock

By Dr. Leon Snyder

In Minnesota we are much concerned with the hardiness of nursery stock sold. Over the years we have built up considerable information on the hardiness of certain fruits, but even here the hardiness picture is far from complete for many parts of the state. In the case of ornamental trees and shrubs, we know little about the degree of hardiness in most parts of the state. The progress thus far in zoning Minnesota for woody plants is but a beginning, and it may take years before the accuracy of this list can be relied upon.

Let us consider the factors that make a tree or shrub hardy. Webster defines "hardiness" as the "capability of endurance." A hardy plant is generally understood to be one that can withstand winter conditions in a given locality without winter protection. A number of factors influence the hardiness picture. Some of these will be considered.

1. Source of seeds or planting stock.—Most species have a rather narrow geographical range and thrive only in the region where they are native or in regions with similar climate. Even within the geographic range of a species, there is considerable variation in the hardiness of the plant. For example, seeds of the Douglas fir collected on the eastern slope of the northern Rockies will grow into trees that survive our Minnesota winters, while seeds collected in Washington or Oregon would fail completely. In the case of the Chinese elm, the Harbin strain from northern Siberia appears to be completely hardy, while the usual strains from farther south in China are quite tender. Even the grafted American elms selected from trees within the state, such as the Lake City and Minneapolis Park elms, are harder than strains selected farther south or east. It is generally safest to plant seeds from healthy plants growing near the nursery or to obtain cuttings or scion wood from similar plants.

2. Growth habits.—Woody plants can be grouped into two groups according to their growth habits. The group with determinate growth makes its growth early in the grow-

ing season and has a longer period to ripen its wood before winter. Plants in this group usually develop prominent terminal buds. The lilac, ash and Ohio buckeye are familiar examples. Most plants in this group are quite winter hardy.

The group with indeterminate growth continues to develop new wood as long as the growing conditions are favorable. The grape and Chinese elm are good examples of this group. Many plants with this type of growth are subject to winter injury following a mild wet fall that favors late growth.

3. Soil.—The soil in which a plant grows has a lot to do with whether the plant comes through the winter without injury. Plants vary considerably in their soil requirements. We find, in nature, the winterberry growing in cool wet acid soil, the bush cinquefoil growing where there is a lime outcrop, the jack pine growing in sand, and, the sugar maple growing in heavier soils rich in organic matter. Since a plant's ability to come through the winter depends on its general health, it will be best to grow plants in the soil type to which they are best adapted. We find that soil drainage is important for certain plants; the redbud and beautybush are generally considered quite tender, yet when they are grown on well-drained soils they come through the winter in the Twin Cities area with but little injury.

4. Effect of diseases and insect attacks.—Only vigorous, healthy plants can be expected to come through our winters. Plants that have been weakened by repeated insect attacks or by disease are much more likely to winterkill. The cytospora canker disease, no doubt, predisposes the bollane and Lombardy poplars to winter injury.

5. Degree of dormancy.—Some plants have a short rest period, and a few warm days in winter are sufficient to cause the buds to become active, with subsequent injury. This is likely to happen with plants grown north of their natural range, such as the forsythia.

6. Minimum temperatures.—The failure of many plants to survive Minnesota winters is due to the effect of extremely low temperatures on the cells of the plant. As winter approaches, a number of changes occur within the plant. The starch

stored in the stems and buds changes to sugars. There is a decrease in the amount of free water and a corresponding increase in the amount of bound (unfreezable) water. These changes make it possible for the plant to withstand low temperatures without injury. The extent to which these changes occur determines the minimum temperature that the plant will withstand.

It can be seen from the above discussion that winter hardiness is a complex problem and that the success or failure of a planting depends on a number of factors. In searching for new and hardier materials it is best not to overlook our native plants. These plants are hardy or else they would not be here. In general, they are freer of insects and diseases than their European cousins. Just compare the susceptibility of the native highbush cranberry and its European cousin, the snowball bush. *Aphis* usually infest the snowball each year to the point where it has little value. The native highbush cranberry, on the other hand, is seldom seriously affected.

In addition to being hardy, a plant must have certain other desirable characteristics. Color is probably of first importance. By color we refer not to the color of the flowers alone. The desired color may be in the summer foliage, the fruits, the autumn foliage, or in the twigs and stems. The best trees and shrubs are those that have interesting colors over a long period. The sugar maple is known for its brilliant autumn colors, the red maple for the red buds in the spring as well as for its autumn color, the white birch for its white bark and golden autumn leaves. The red-stemmed dogwoods have interesting white flowers followed by white summer fruits. As fall approaches the leaves turn color, and when the leaves have fallen one still has the brilliant red twigs to enjoy through the winter. Of course, we appreciate plants that have beautiful bloom, but this feature alone is often overemphasized. No one will deny that the flowering plum is beautiful when in bloom, but after the fleeting bloom has past there is nothing particularly attractive about the shrub.

With color we usually associate fragrance. One can scarcely walk by the Russian olive when it is in bloom without being aware of its fragrance.

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Talk by Dr. Leon Snyder, extension horticulturist, University of Minnesota, before the Minnesota State Nurserymen's Association, at St. Paul, December 5.

Michigan State Opens New Greenhouses

Visitors from over the country attended the formal opening of the new \$400,000 Plant Science greenhouse range at Michigan State College, East Lansing, on January 12. Located about a half mile from the Horticultural building and the old greenhouses, the new houses form in reality a laboratory under glass which covers over 57,000 square feet.

The new range was financed through special legislative appropriations obtained largely through the efforts of the Michigan Agricultural Conference, which represents seventy-four agricultural organizations in the state and in which the Michigan Association of Nurserymen, the Michigan State Florists' Association, the Michigan Vegetable Growers' Council and others play an important part.

The program for the formal opening included a special preview for the Michigan state legislature, the Michigan state board of agriculture, the Michigan Agricultural Conference and invited guests. The official opening took place in the afternoon, when Ernest L. Anthony, dean of the school of agriculture; Charles Force, chairman of the Michigan Agricultural Conference, and James Sykora, Chicago vice-president of the Society of American Florists, presided. Afterward there were conducted tours of the greenhouses and inspection of new laboratory facilities in the Horticultural building. The annual meeting of the Michigan Agricultural Conference was held in the afternoon, and in the evening

there was a banquet in the Michigan State College Union building.

Representing Michigan nurserymen, were James E. Ilgenfritz, Monroe, president of the American Association of Nurserymen; Arthur L. Watson, Grand Rapids, past president of the Michigan Association of Nurserymen, and Bernard Ward, secretary treasurer of the Michigan Association of Nurserymen.

The general over-all plan was developed by Dr. Paul R. Krone, working with heads of the various departments concerned and with the greenhouse committee of the Michigan Agricultural Conference, whose members included Bernard Ward, Lansing nurseryman; B. W. Toornman, Kalamazoo florist, and John Haack, Armada vegetable grower. The detailed plan was prepared by Lord & Burnham, with Walter Kelsy, of that firm, serving as consultant.

The operation of the greenhouses has been placed in the hands of a special all-college committee consisting of Dr. H. B. Tukey, head of the horticultural department; Dr. L. L. Turk, soils department; Dr. William Drew, botany department; Dr. Ray Hutson, entomology department; Prof. Roy Decker, farm crops department, and Dr. Paul Krone, floriculture department, who is chairman of the committee and general manager of the range.

The new range is divided into fifty-seven individual compartments, each separately controlled by thermostats and automatic valves and each

equipped with top and side ventilation. Two of the houses are Lauer aluminum houses and the rest are Lord & Burnham steel-frame, truss houses, thirty-six feet wide. Twenty-inch glass is used throughout.

Steam for heating is supplied by the college's central heating system. The greenhouse heating system is of the trombone type, with overhead lines in some houses to support those used along the walls and under the benches. Radiant heating is being tried in one house.

A variety of growing benches and beds, including tile, wood, watertight concrete, Transite and Apac, has been installed. Plans call for erection of beds of other types experimentally during the year. An auxiliary high-pressure steam line has been installed for soil sterilization in each of the houses, and ground beds are equipped with tile for sterilization.

Special lighting is provided in several houses to supplement natural daylight. Three darkrooms have been provided, two to permit photoperiodic studies, and one to facilitate experimental work in propagation under artificial light and under lights of varying wave length.

The greenhouses are all connected by a passage corridor that runs the full length of the range, and the passageway is wide enough so that a truck may be driven through it to service the houses. Four offices and laboratories are provided in the head house for those doing experimental work in the greenhouses. There are two walk-in refrigerators, plant storage room, an insulated bulb storage room and other larger service and storage rooms.

The new range is to be used entirely for research in plant sciences. Provisions are made for basic research as well as applied research in nursery crops, botany, entomology, floriculture, vegetable crops, fruits, soils and farm crops. Approximately half of the range has been assigned for research work on ornamental crops.

RECENTLY Burbank Floral & Nursery were started at 257 Burbank avenue, Dallas, Tex., by O. M. Blasingame.

HAVING operated Smith's Greenhouses at Ferguson, Mo., with Mary, Tom and Charles Smith, T. Mahan Smith announces that they will start business in spring as Dix Nursery, at Route 1, Box 149, Jefferson City, Mo.



New \$400,000 Greenhouse Research Center at Michigan State College.



CHARLIE CHESTNUT



A LETTER TO THE PRES.

Dear Jim:

Well Jim, you made it! Remember back in the war years when you were fighting the war all weighted down with brass you were wondering if you would ever get back to your nursery. Probably you never thought the members would make you the pres. of the convention. But you can never tell about the members, they do some mighty funny things.

At different times I have offered suggestions to the pres. and so far as I am concerned you need a little pep talk the same as anybody. For instance I been reading that the convention is now 75 years old. The members are looking for something special. One of my neighbors has got a parrot I could get practically for free. This is on account of he can only say three words as follows "Win with Dewey." Now here is the idea. Some of the members say they will be darned if they will go to Washington on account of all the Democrats. Here is where my parrot would come in. You could put the cage right in the meeting room so the members from Maine, New Hampshire, New Haven and Hartford would feel better about it. It would seem more homelike to have the Republican atmosphere. Let me know what you think.

I run on to a funny situation the other day where a speaker was telling how you could raise 600 bushels of potatoes per acre instead of 200. All you have to do is fertilize and irrigate. For heavens sake, Jim, don't put any speakers on the program with ideas like that. If we can't consume at the rate of 200 bushels per acre, how in the world will we dispose of three times as much. Some of the members might start raising three times as many osage orange or catalpa bungei, then we would have to ask for a subsidy from Congress.

Now that brings me to my next point. Why is it that the government in Washington buys up surplus potatoes, milk, butter, etc., thereby keeping the farmers pepped up so they will vote right? According to all the rules, we nurserymen are farmers. We raise crops. We raise too much of some items. We could easily raise too much of a lot of items if there is any chance to get a subsidy

established for nursery stock. If you could work up that idea, Jim, probably the members would be glad to run you for two or three terms. Take it up with the Washington, D. C. office and put a committee on it. Don't put Emil on it however, as he is only interested in a subsidy on honeysuckle, and some of the members would doubtless make a fuss. You have to think of those things when you are pres. of the convention.

Another thing that was brought up at a recent meeting is in regards to the increase in postal rates and cutting down the size of parcel post. Your man in Washington, D. C. was all worked up over it. He wants me to write to my congressman about it. It may be a big surprise to you, Jim, but me and quite a lot of the members, the small members that is, is glad to see it. The only time I ever sent anything by parcel post was two years ago when a customer left his glasses at my place and asked me to mail them along with 25 strawberries. Otherwise it don't mean a thing except it might keep out a lot of guys like John Bushbottom and some others I could mention flooding my customers with their stuff by parcel post. In fact I think the size of packages should be cut down to the size of a cigar box, then maybe some of us local boys could do a little more business and instead of sending the usual \$10 in for dues we could send \$12 or \$14. Think that over, Jim.

Then there is this matter of the next census. We want to be careful how we handle that situation. For several years your man in Washington has been bragging up the nurserymen, how much business they was doing, how many gooseberries was being grown, etc. In fact I was talking to my local senator and he got the idea the nurserymen was second to General Motors, just ahead of the Standard Oil Co. in total importance. Now if we ain't careful the senators will find out we're only as big as the Cracker Salters Union and then when your man in Washington goes around, they will say "You again, go back and tend your rhubarb," or some such remark. It might be best to let well enough alone. Without any figures we are doing O. K. With a portfolio filled with charts and

fancy statistics we might have to stand on the actual figures. Better check with the Washington office and see what he has established among the senators as the relative importance of the nursery business. Maybe he has done a better job than any we could juggle out of the census dope.

It might be a good idea to straighten out some of the members on this new fangled idea of temperature control. I dont think they all got the hang of it yet. Like Mr. Morse was talking to Emil about the awful draft there was in the northwest corner of his house in the pantry. Emil was telling him he should go to work and put in a hedge of Russian olive and everything would be O. K. But before Emil and me could get down there with the Russian olive he called up and cancelled the order. "The Mrs. left the window open about a inch on account of some sourkraut she had in there. I threw out the sourkraut and closed the window," he says. Thats the only deal we worked up yet, but if anything else turns up I will let you know.

Your man in Washington was asking me to keep on the lookout for clippings in the local paper, the Riverbend Gazette, that is. Anything about the nursery business or nurserymen he wants us to send to the Washington D. C. office. Now take last night there was a piece as follows: "Local Nurseryman Goes to Peoria." There was a piece about Emil being a delegate to the Odd Fellows Convention. And the other day, last Thursday in fact, as its only a weekly paper, there was a notice as follows: "Local Nurseryman Donates Christmas Tree." It seems Emil didnt intend to actually give the tree free to the Civic Club, but after it was in the paper he didnt have the nerve to send the bill. It dont seem to me this stuff is really important enough to be cut out and go to the Washington Office but you know best, Jim. If you want more of this stuff, we can fix you up. Thats about the only thing I seen in the paper in regards to nurserymen for the last ten years, since Emil was arrested for shooting a wild goose out of season. Emil wrote up

a piece last spring about honeysuckle which he sent up to the paper, but they called up and said it would cost \$14 for advertising rates, so it didn't run. Our paper is awful cagey about running free stuff. I don't see how the Washington D. C. office gets away with the stuff they claim is out in the papers. Maybe it's someplace, but it ain't never been in the Riverbend paper.

Now to get back to the program for the convention. The members, as I told you, are expecting some high powered stuff. I was thinking about Senator Snort. I don't know where he hails from, but he is a heavy set windy gent that you see a lot of in the newspapers. Sometimes he puts out with some sage remarks, but you would have to put him at the end of the program. In case he decided to run a filibuster the members could walk out.

Dont overlook somebody from the Federal Trade Commission. Better get the head man if you can. I sure would like to have John Bushbottom in the room when he talks, as John sure could do with a good going over on a lot of his deals. You know John, dont you Jim, he's quite a character.

Probably it would be a good idea to have the top man in the FBI. Not that the members would have to be shadowed in Washington, but some of our wealthy members from out west should be looked after.

Emil hopes you could get Mr. Hoover in person because he wants to get some pointers for his job as deputy sheriff. Emil goes to the post office to look over the criminals posted there on the bulletin board. One time he was almost ready to arrest a man he seen downtown that turned out to be Mr. Morses brotherinlaw. But dont put yourself out for Emils sake because unless he has a big run on honeysuckle next spring, he aint likely to make it to Washington anyway.

Probably some of the backsliding members or some of them from down south would like to have Mr. Truman on the program, but it wouldn't go with the members out this way. They would sooner have Alf Landon. But if you can't get the president, could you get the vice-president, some of us oldtimers has got a real admiration for that man. But we would settle for the Veeps new wife. Sure would like to see her, Jim.

Yours truly,
Chas. Chestnut.

GEORGE L. CURTIS, proprietor of Genesee Nurseries, Flint, Mich., is spending the winter at Miami, Fla.

ARMSTRONG ROSE WINS WORLD AWARDS.

The first rose in history to win all three top awards is Sutter's Gold developed by H. C. Swim, director of research for Armstrong Nurseries, Ontario, Calif. Already an All-America rose selection for 1950 and winner of France's Bagatelle award, Sutter's Gold was last month announced the winner of the famous Concours International de Roses at Geneva, Switzerland. The cup of Geneva and gold medal certificate of the Concours International de Roses were presented to John Awdry Armstrong, vice-president, and Mr. Swim by Dr. Walter Schmid, Swiss consul at Los Angeles, in a ceremony December 22.

Explaining the Concours International de Roses, Dr. Schmid said that each year leading rose hybridizers in every country are invited to

AMERICAN NURSERYMAN

York. Hospital authorities described his condition as poor. A resident of Ithaca, N. Y., Dr. Bailey was formerly dean of the college of agriculture at Cornell University and now conducts the Bailey Hortorium there.

HANEY TO MICHIGAN.

Formerly with the Boyce Thompson Institute for Plant Research, Yonkers, N. Y., and with the United States Department of Agriculture, Beltsville, Md., Dr. W. J. Haney has joined the department of horticulture staff at Michigan State College, East Lansing. Dr. Haney received his Ph. D. from the University of Maryland just prior to his enlistment in the marine corps. Following his service he joined the staff of George J. Ball, Inc., West Chicago, Ill., and has also been associated with the Carnegie Institute, Cold Springs Harbor, N. Y.

HAROLD H. CLEGG.

Harold H. Clegg, secretary to the executive committee of the Indiana Association of Nurserymen, was born at Albion, Mich., June 7, 1909. He took undergraduate work at Purdue University, Lafayette, Ind., and at the University of Wisconsin, Madison, before receiving his A.B. degree from De Pauw University, Greencastle, Ind., in 1933. He later did postgraduate work at the Indiana University school of landscape design, Bloomington, and also attended Harvard University.

In February, 1938, Mr. Clegg bought the Varsity Landscape Service, Lafayette, and now operates that business as a subdivision of Associated Sales, a real-estate company, which is also engaged in development of residential subdivisions.

Besides his duties as association secretary, Mr. Clegg is also a member of the subcommittee for planning the program of the association's winter meeting and is also on the committee for nominations. He holds membership in the American Society for Horticultural Science, the American Society for the Advancement of Science and the American Forestry Association.

One of Mr. Clegg's special projects at his nursery is work recently started on dwarf rootstocks for ornamentals. He expects the work to extend over a period of ten years before results can be reported.

As a hobby, Mr. Clegg enjoys the study of plant materials in commerce which are suitable for camouflage.



Harold H. Clegg.

enter their finest new developments in this contest, which is sponsored by the horticultural societies of Switzerland and the city of Geneva. The contest is judged for two years, each contest period ending June 2, with a public announcement made later more closely to precede the following year's growing season. The award consists of a gold medal certificate for the best rose entered in the contest, and the cup of Geneva, a beautiful object of art awarded by the city of Geneva for the best hybrid tea rose. Only one of each award is made for each 2-year contest period.

DR. BAILEY INJURED.

Dr. Liberty Hyde Bailey, 91-year-old botanist, fractured his upper left thigh in a fall December 28 at New

Western Washington Horticultural Meet

By C. W. Wieting

At a fortieth annual meeting of the Western Washington Horticultural Association December 12 to 14 at Fruit Grange Hall, Puyallup, Dr. John H. Hanley, Seattle, whose activities include being a radio garden commentator and garden editor of the Seattle Post-Intelligencer, was chosen president. Morrill Delano, Puyallup, was elected first vice-president, Art Osgood, Lynden, second vice-president, and C. D. Schwartze, of the Western Washington experiment station, Puyallup, secretary-treasurer.

By concentrating their attention on solving modern horticultural problems, speakers found a lively interest on the part of their listeners. Nearly 600 persons attended.

Agricultural Chemicals.

President E. L. Ticknor, Centralia, opened the program by introducing Dr. Folke Johnson, of the western Washington experiment station, Puyallup. The morning theme was "What's New in Agricultural Chemicals?", and Dr. Johnson answered this question regarding fungicides. Because of the tremendous losses incurred throughout the United States from fungous diseases much attention has been given by research and chemical organizations to the development of more satisfactory controls. Referring to the history of fungicidal controls, Dr. Johnson traced the development of the sulphurs from the simple ground dusts to wettable forms and pastes and to liquid lime-sulphur, the last-named being declared the most effective.

Bordeaux mixture was described as the oldest of the copper fungicides. However, like other forms of copper, it is toxic to some plants, especially the curcubits. Fixed or insoluble coppers find wide use as sprays, dusts and seed treatments, and they are frequently mixed with insecticides. Mercury materials, such as mercuric chloride and mercuric oxide and others, are the most poisonous to man and animals, but, nevertheless, are finding increased use, especially the organic mercury types. A number of forms of organic mercury sprays are available for treatment of apple scab, peach leaf curl, brown rot and cherry spur blight.

After dealing with a number of recently developed materials, including Fermate, Spergon and Phygon, Dr. Johnson discussed the potential

value of chemical therapy. Through the injection of chemicals into the plant system it is sometimes possible to control diseases. Other chemicals may be placed on the soil or in the soil and then be absorbed by the roots and dispersed throughout the plant to control disease.

Recent developments in fertilizers were described by Dr. Karl Baur, western Washington experiment station. Pictures were shown of equipment used to apply nitrogen directly to the root-feeding area of the soil. The nitrogen source is anhydrous ammonia, which is available in cylinders and tanks, as the gas is rapidly lost when released in the air. Consequently, special plow or cultivator attachments are necessary to lead the gas through tubes directly under the soil where it is taken up by the soil. Dr. Baur also described materials that could be used as sources of nitrogen which would not liberate their entire content of nitrogen at one time. By the proper selection of materials such as ammonium nitrate, which has nitrogen partly in the ammonium form and partly in the nitrate form, it is possible to delay the availability of nitrogen until the weather is favorable for plant growth.

Dr. Baur mentioned the value of applying fertilizers directly to plant foliage through spray applications. Response is reported to be more rapid than through applications directly to the soil. This is especially true of some of the minor elements. When the necessarily minute doses of minor elements are applied to the soil they are often made unavailable by the action of other soil chemicals before the plants can use them. Listeners were cautioned about some specially compounded fertilizers for which too enticing claims are made. These compounds are often extremely high in price when the actual fertilizer value of the major nutrients is considered.

After ten years of experimentation with different methods of application, Dr. Baur felt he could recommend as the most economical the banding system. This method of applying fertilizer in a ribbon close to the plants has been found to give better results than broadcasting.

Robert Eichman, of the Stauffer Chemical Co., Portland, Ore., discussed "The Insecticide Situation." He emphasized that Parathion must be used with extreme caution. When

it has been carelessly used some injury to operators has been noted. However, the material is an excellent and powerful insecticide, and with the proper caution in the use of respirators and protective clothing, it can be used with no injury to the operator. To eliminate the hazard of persons' breathing the fumes when mixing Parathion powders preliminary to spraying, manufacturers now have available paste forms and nondust forms.

DDT was especially recommended for use in the Pacific northwest. Benzene hexachloride in the form of Lindane was suggested as good because of the less prominent odor created. When the long-time effectiveness of Parathion after application would be a disadvantage, Mr. Eichman suggested the use of TEPP. The effect of this material lasts only a short time, but it has a strong insecticidal action before breaking down.

Blueberry Growing.

The afternoon session was given to discussing some problems of small fruit growing, especially blueberries and raspberries. C. E. Bond, Aves Blueberry Farm, Puyallup, spoke on blueberry marketing as it is done in the northwest. Dr. Baur threw some light on the soil needs of these crops. He indicated that the kinds of soils that blueberries will tolerate and on which they will produce a good crop are considerably more varied than was at one time supposed. Experiments show that some sandy loam soils provided with adequate moisture and proper acidity will produce good crops and may have some advantages over the usual peat soils.

The black vine weevil is a serious pest on blueberries and raspberries and also on a number of other crops including many ornamentals. Dr. E. P. Breakey, of the western Washington experiment station, described some ways of controlling this insect in both its grub and adult stages. Benzene hexachloride applied as a one per cent dust about the base of plants was suggested. Fruit-pulp-base poison baits applied about the plants are the best control for adult weevils. Dr. Breakey has found that the best time for application of the baits is when raspberries are just starting to ripen. Sodium fluosilicate or sodium fluoride are the active poisons in the baits.

The kind of nitrogen one uses on

blueberries is just as important as the amount. Sodium nitrate killed blueberry plants whereas ammonium nitrate and ammonium phosphate provided the best stimulation. Best results came from sixty pounds of actual nitrogen per acre, according to Dr. Schwartz's trials. Use of some peat in the soil is important at planting time, and sawdust mulches also proved considerably helpful in keeping the soil cool and moist. Additional nitrogen fertilizers are necessary when a sawdust mulch is used.

Arthur Myhre, of the Western Washington experiment station, presented an analysis of blueberries according to their fruiting, eating and processing qualities. Several varieties were mentioned starting with Weymouth, the earliest, and ending with Burlington, the latest. According to Mr. Myhre, the ideal plant should be of strong growth and of upright habit, with strong fruiting branches, and have a well developed blueberry flavor.

Chemical Weed Control.

The afternoon of December 13 brought together a group of authorities to present the latest findings on weed control. Dr. L. W. Rasmussen, of Washington State College, Pullman, presented an analysis of the chemical control of weeds in general. Three major types of weed control materials were mentioned. First were the soil sterilants, or chemicals that destroy all vegetative growth and often leave the soil incapable of producing other plant growth for some time. This type was suggested for small areas, such as along fence rows where obnoxious growth endangers cultivated lands. Sodium chlorate,

boron compounds, arsenicals, carbon bisulphide and methyl bromide were some kinds mentioned as of value. If strong weeds have infested land needed for crops it may be necessary to select one of these materials for application. Use of the material, however, may mean waiting as long as an entire season before the toxic chemicals disappear from the soil.

The second type mentioned was the contact form of weed killers. These are applied to the soil or to weed growth and tend to enter the plant cells and kill them. Special types of oils are most often used. When the oil is to have a selective effect, Dr. Rasmussen suggested the use of low-boiling oils. The weed-killing effect of oils is often increased by the addition of fortifying materials. When so strengthened this type of weed killer is especially valuable for preemergence application.

While these contact types of weed killers kill the plant tissue, they do not move through the plant system as do the growth regulator types, which provided the third form of weed killer described by Dr. Rasmussen. 2,4-D, TCA, IPC and their various properties were also mentioned.

In a talk on weed control of bulb crops Dr. C. J. Gould urged the cautious use of materials on a trial basis. Bulb foliage is sensitive to some weed killers especially when the leaves are hanging or procumbent so that the material will not run off readily. Good results have been found by using Diesel oils fortified and applied just before bulbs break through the ground. Weed killers of the flame thrower type

have been found effective on gladiolus and some other bulbs.

Session on Ornamentals.

Mrs. L. N. Roberson, L. N. Roberson Co., Seattle, was chairman for the session devoted to ornamental plants.

"Winter Hardiness in Woody Plants and Perennials" was the subject of a talk by Brian O. Mulligan, director of the University of Washington Arboretum. He cited some experiences there with a variety of plants and mentioned the fact that all plants have an optimum temperature where they are native. In addition, they have a maximum and minimum range of tolerance, which may be considerable or only slight. Some plants are hardy considerably farther north than their native habitat would indicate. Mr. Mulligan mentioned examples of fothergilla, franklinia and choisya. To obtain the greatest hardiness from native plants it is best to obtain seeds from plants growing

[Concluded on page 60.]

LANDSCAPED OFFICE.

Alfred N. Cook, president of the Little Tree Nursery Farm, Roanoke, Va., has discovered that it is good business to maintain an attractively designed and landscaped office building. In line with this principle, his office resembles a small cottage, having small-paned windows, two brick chimneys and a roofed-over entry way with wrought-iron railings on each side. A well proportioned foundation planting and a brick walk, which leads up to and around the building, complete the picture.

The building is constructed of 6-inch cinder blocks, painted white. Its dimensions are 24x32 feet. Inside, the floor is cement covered with asphalt tile. The ceiling is eight feet four and one-half inches high, with a roof pitch of six feet. There are fireplaces in each of the chimneys, and there are three rest rooms in the building, which is graded at ground level.

Mr. Cook is owner and operator of the nursery, which comprises twenty-seven acres of nursery stock and eighty acres of farm land. He uses a D6 Caterpillar Angle Dozer and a D4 Angle Dozer and says that he does not know how he could operate without them. "I think these two tractors have meant more to my nursery and business than any other \$15,000 I have ever invested in my life," he said. Mr. Cook has been operating his nursery for thirteen years and uses modern equipment throughout.



Office Building of Virginia Retail Nursery.

Plant Notes Here and There

By C. W. Wood

A beginner in the culture of alpine plants wonders, after outlining his schedule, what was wrong with his treatment of *Campanula allioni*. I disliked to tell him that about everything was wrong and that it would take too long to relate my experience with the plant in a personal letter. And I told him to look for a report in an issue of the American Nurseryman early in 1950; so I am fulfilling the promise now.

Let me say at the outset that this is a plant for the specialist, demanding careful treatment at every stage of its culture. In the first place, its carrot-like roots resent disturbance as does nothing else of its kind that I recall; even the fleshy stolons which radiate from an old specimen and look as though they would afford a ready means of increase frown and sulk, usually refusing to be comforted, after being detached from the parent.

Farrer called *C. allioni* "the type of the most difficult campanulas of the most beautiful alpine group" and later referred to it as "usually, and probably rightly, taken as a type of the irreconcilable lime-haters." Taking my cue from his and others' recommendations for its culture, I struggled for a long time with soil mixtures, stressing absence of lime in the composts and never really succeeding with the plant until I forgot all about alkalinity and acidity and commenced to grow it in almost pure gravel with just a dash of leaf mold to give it a little nourishment. Later experiments showed that better success follows from growing it in pure gravel than in a richer mixture.

Give it, then, a meager soil, root moisture and shade during the heat of summer days, and *C. allioni* should be as permanent as "a limited, dying species, weak in reproduction and incapable of any great spread" can well be. All of this may sound discouraging, and it is meant to be, for *C. allioni* is not a plant for general distribution; rather, it is for the careful grower who is able to take care of such treasures and has clients who are as painstaking as the nurseryman.

Its height of three or four inches, not six or eight inches, as one sees it described in amateurs' journals at times, and its great, nodding bells, an inch and a half wide, one to a stem, are worth working for. Another lovely feature of the plant that is seldom mentioned in literature is

its rosettes of long narrow leaves, silvery with stiff hairs. Although the flower is almost invariably described as purple or white, rarely the latter, the color range also includes what I call lilac and some shades which closely approach pink.

While we are on the subject, it might be well to devote a little space to two or three others of the *allioni* group, all with calyx appendages, which readily distinguish them from the dwarf campanulas usually grown in gardens. One might easily come to the conclusion after reading a systematic treatment of campanula that *C. barbata* is closely related to the plant discussed in the preceding paragraphs, but, judged from the gardeners' standpoint, they are far apart. In the first place, *C. barbata* sends stems to a height of ten inches or a foot, each of them carrying a string of pale blue bells, except in the rare variety, *uniflora*, which has one flower to a stem and thereby misses much of the glory of the type.

Although the bells are smaller than those of *allioni*, they are far more numerous, and the conspicuous fringe of hairs at the mouth (hence the name *barbata*) gives them distinctive beauty.

Then, too, *barbata* has been far easier to grow in our experiments here in northern Michigan, thriving in almost any well drained soil that is not too dry. It takes a little shade from the hot sun in this climate and resents winter dampness. It is a most beautiful alpine, and its variety *alba* is even more so, though truth compels me to say that it was, contrary to books that tell us it is a true perennial, short-lived in our experiments, often dying after the first profuse blooming period. It has been my experience, in fact, that most bell-flowers with their flowers arranged in what gardeners call a spike are more or less monocarpic. That has been true of the beautiful little mountainer, *C. alpina*, which is often

[Continued on page 18.]

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	100 rate each	1000 rate each	100 rate each	1000 rate each	
10,000 <i>Abies balsamea</i> , 2-yr. S.....	.06	.05	700 <i>Taxus baccata fastigiata</i> , 3-yr. T, 6 to 16 ins.....	.30	.25
1000 <i>Abies lasiocarpa</i> , T, 3 to 4 ins.....	.06	.05	200 <i>Taxus baccata fastigiata</i> , TT, 9 to 12 ins.....	.40	..
500 <i>Azalea amoena</i> , 1-yr. T, 6 to 9 ins.....	.20	.18	200 <i>Taxus baccata fastigiata</i> , TT, 12 to 15 ins.....	.50	..
500 <i>Azalea hinodegiri</i> , 1-yr. T, 6 to 9 ins.....	.20	.18	200 <i>Taxus baccata fastigiata</i> , 15 to 18 ins.....	.75	..
800 <i>Cedrus atlantica glauca</i> , pot grafts.....	.60	..	150 <i>Taxus canadensis stricta</i> , 2-yr. T.....	.30	..
500 <i>Chamaecyparis obtusa gracilis</i> , pot grafts.....	.35	..	50 <i>Taxus canadensis stricta</i> , TT, 10 to 12 ins.....	.50	..
1000 <i>Chamaecyparis obtusa gracilis</i> , 2-yr. grafts.....	.60	.50	40 <i>Taxus canadensis stricta</i> , 2-yr. T, 8 to 12 ins.....	.60	..
250 <i>Chamaecyparis plumosa</i> , 4-yr. T, 12 to 16 ins.....	.30	..	1500 <i>Taxus capitata</i> (new hedgerow type), 2-yr. T, 8 to 12 ins.....	.35	.30
850 <i>Chamaecyparis plumosa</i> , TT, 12 to 15 ins.....	.35	.30	6000 <i>Taxus capitata columnaris</i> (Parson's pyramidalis), 2-yr. T, 6 to 10 ins.....	.30	.25
500 <i>Chamaecyparis plumosa aurea</i> , 2-yr. T, TT, 10 to 12 ins.....	.25	.20	5000 <i>Taxus cuspidata</i> (upright seedlings), 1-yr. S.....	.06	.05
500 <i>Chamaecyparis plumosa aurea</i> , TT, 10 to 12 ins.....	.40	.35	5000 <i>Taxus cuspidata</i> (upright seedlings), 2-yr. S.....	.12	.09
1000 <i>Euonymus radicans</i> , 2-yr. T, 6 to 9 ins.....	.30	.25	2000 <i>Taxus cuspidata</i> , 2-yr. T, 6 to 10 ins.....	.30	.25
3000 <i>Euonymus radicans carrierei</i> , 2-yr. T, 9 to 12 ins.....	.30	.25	3000 <i>Taxus cuspidata</i> , 3-yr. T, 8 to 10 ins.....	.35	.30
2000 <i>Euonymus radicans coloratus</i> , T, 10 to 12 ins.....	.25	.20	2000 <i>Taxus cuspidata</i> , 4-yr. TT, 8 to 12 ins.....	.45	.40
2000 <i>Euonymus radicans coloratus</i> , TT, 10 to 12 ins.....	.35	.30	300 <i>Taxus cuspidata</i> (No. 2, semiupright), 3-yr. T, 8 to 15 ins.....	.30	..
1000 <i>Euonymus radicans erectus</i> , 2½-in. pots.....	.15	.15	400 <i>Taxus cuspidata</i> (No. 3, semiupright), 3-yr. T, 6 to 10 ins.....	.30	..
500 <i>Euonymus radicans</i> , variegated, T, 6 to 10 ins.....	.20	..	3000 <i>Taxus cuspidata andersonii</i> , 2-yr. T, 6 to 10 ins.....	.30	.25
5000 <i>Euonymus radicans vegetus</i> , R.C. from flats.....	.10	.09	5000 <i>Taxus cuspidata brownii</i> , 2-yr. T, 8 to 12 ins.....	.30	.25
5000 <i>Euonymus radicans vegetus</i> , T, 6 to 10 ins.....	.35	.30	1000 <i>Taxus cuspidata brownii</i> , TT, 8 to 10 ins.....	.35	.30
1000 <i>Ilex crenata</i> , 1-yr. T.....	.18	..	1000 <i>Taxus cuspidata buffoni</i> , 2-yr. T.....	.30	.25
1000 <i>Juniperus chinensis sargentii</i> , 2-yr. T.....	.35	.30	1000 <i>Taxus cuspidata buffoni</i> , 4-yr. TT.....	.45	.40
500 <i>Juniperus depressa plumosa</i> , T, 6 to 8 ins.....	.35	.30	1000 <i>Taxus cuspidata</i> (cuttings), 2-yr. T, 6 to 10 ins.....	.35	.30
1000 <i>Juniperus excelsa stricta</i> , 2½-in. pots.....	.17½	..	600 <i>Taxus cuspidata columnaris</i> , 3-yr. T, 8 to 16 ins.....	.35	.30
1000 <i>Juniperus glauca hetzii</i> , 2½-in. pots.....	.20	..	200 <i>Taxus cuspidata columnaris</i> , TT, 9 to 12 ins.....	.45	..
1000 <i>Juniperus horizontalis douglasii</i> , 2½-in. pots.....	.17½	..	400 <i>Taxus cuspidata columnaris</i> , TT, 12 to 15 ins.....	.60	.50
1500 <i>Juniperus pfitzeriana</i> , 2½-in. pots, 4 to 6 ins.....	.23½	..	400 <i>Taxus cuspidata columnaris</i> , TT, 15 to 18 ins.....	.75	.70
1000 <i>Juniperus pfitzeriana</i> , 2½-in. pots, 6 to 8 ins.....	.30	..	1000 <i>Taxus cuspidata compacta</i> , 2-yr. T, 6 to 10 ins.....	.30	.25
2000 <i>Juniperus suecica</i> , 2-yr. T, 6 to 8 ins.....	.20	.18	1000 <i>Taxus cuspidata nana</i> , 2-yr. T, 6 to 8 ins.....	.25	.20
10,000 <i>Juniperus virginiana</i> , 2-yr. S, 7 to 14 ins.....	.06	.05	3000 <i>Taxus cuspidata nana</i> , 3-yr. T, 5 to 10 ins.....	.30	.25
2700 <i>Juniperus virginiana</i> , 3-yr. T, 8 to 12 ins.....	.12	.12	2000 <i>Taxus cuspidata nana</i> , TT, 6 to 10 ins.....	.45	.40
6000 <i>Juniperus virginiana</i> (for grafting), 3-yr. T, 6 to 8 ins.....	.10	.10	1000 <i>Taxus cuspidata nana</i> , 5-yr. TT, 8 to 10 ins.....	.65	.60
5000 <i>Juniperus virginiana</i> , 3-yr. T, 4 to 5 ins.....	.08	.08	3000 <i>Taxus cuspidata nana</i> , 6-yr. TT, 10 to 12 ins.....	.85	.75
2000 <i>Juniperus virginiana</i> , named varieties, pot grafts.....	.45	.40	5000 <i>Taxus cuspidata nana erecta</i> , 2-yr. T.....	.30	.25
2000 <i>Mahonia aquifolium</i> , T, 6 to 10 ins.....	.25	.22	1000 <i>Taxus cuspidata thayerae</i> , 2-yr. T.....	.30	.25
1000 <i>Mahonia aquifolium</i> , 1-yr. S.....	.06	.05	50 <i>Taxus cuspidata thayerae</i> , TT, 12 to 15 ins.....	.60	..
8000 <i>Picea abies</i> , 2-yr. S, 1½ to 3-in.....	.07	.06	1000 <i>Taxus intermedia</i> (spreading), 2-yr. T, 8 to 10 ins.....	.30	.25
10,000 <i>Picea abies</i> , 3-yr. S, 2 to 5 ins.....	.07	.06	600 <i>Taxus intermedia</i> (spreading), 3-yr. T, 8 to 10 ins.....	.35	.30
30,000 <i>Picea excelsa</i> , 2-yr. S, 3 to 6 ins.....	.04	.03½	1000 <i>Taxus intermedia</i> (spreading), 5-yr. TT, 8 to 10 ins.....	.50	.45
4000 <i>Picea excelsa</i> , 3-yr. S, 3 to 8 ins.....	.06	.05	500 <i>Taxus intermedia</i> (spreading), 2-yr. TT, 10 to 12 ins.....	.75	.70
10,000 <i>Picea excelsa</i> , 3-yr. T, 3 to 6 ins.....	.10	.09	2500 <i>Taxus intermedia hummelliana</i> , 2-yr. T, 6 to 10 ins.....	.30	.25
5000 <i>Picea excelsa</i> , 1-yr. S.....	.03	.02½	2000 <i>Taxus media</i> (upright strain), 2-yr. T, 9 to 12 ins.....	.30	.25
25,000 <i>Picea pungens</i> , 2-yr. S, 2 to 5 ins.....	.07	.06	1000 <i>Taxus media</i> (upright), 3-yr. T, 12 to 15 ins.....	.30	.25
5000 <i>Picea pungens</i> , 3-yr. T, 1½ to 4 ins.....	.12	.10	4000 <i>Taxus media</i> Halloran Strain, 2-yr. T, 6 to 8 ins.....	.25	.22½
1500 <i>Picea pungens</i> , 3-yr. S, 3 to 6 ins.....	.07	.06	2000 <i>Taxus media</i> Halloran Strain, 3-yr. T, 9 to 12 ins.....	.35	.30
1000 <i>Picea pungens moerheimii</i> , pot grafts.....	1.00	..	3000 <i>Taxus media</i> Halloran Strain, TT, 9 to 12 ins.....	.60	.50
1000 <i>Pieris japonica</i> , 3-yr. T.....	.10	.05	3000 <i>Taxus media</i> hatfieldi, 2-yr. T, 8 to 12 ins.....	.60	.50
4000 <i>Pinus banksiana</i> , 2-yr. S, 8 to 14 ins.....	.03	.02½	2000 <i>Taxus media</i> hatfieldi, 3-yr. T, 8 to 12 ins.....	.30	.25
2000 <i>Pinus densiflora</i> , 3-yr. S, 9 to 18 ins.....	.05	.04	3000 <i>Taxus media</i> hatfieldi, 4-yr. TT, 10 to 12 ins.....	.40	.35
6000 <i>Pinus densiflora</i> , 3-yr. T, 4 to 9 ins.....	.10	.09	300 <i>Taxus media</i> hatfieldi, 6-yr. TT, 15 to 18 ins.....	.85	.75
2000 <i>Pinus nigra austriaca</i> , 2-yr. S, 4 to 6 ins.....	.06	.05	10,000 <i>Taxus media</i> hicksii, 2-yr. T, 10 to 12 ins.....	.25	.20
20,000 <i>Pinus montana mugus</i> , 2-yr. S, 2 to 4 ins.....	.05	.04	2000 <i>Taxus media</i> hicksii, 3-yr. T, 12 to 15 ins.....	.30	.25
8000 <i>Pinus montana mugus</i> , 3-yr. S, 3 to 6 ins.....	.08	.07	1000 <i>Taxus media</i> hicksii, 4-yr. TT, 10 to 12 ins.....	.40	.35
8000 <i>Pinus montana mugus</i> , 3-yr. T, 3 to 6 ins.....	.10	.09	500 <i>Taxus media</i> hicksii, 6-yr. TT, 15 to 18 ins.....	.80	.75
4000 <i>Pinus resinosa</i> , 3-yr. T, 2 to 5 ins.....	.09	.08	10,000 <i>Taxus media</i> hicksii, 3-yr. T, 12 to 15 ins.....	.30	.25
8000 <i>Pinus resinosa</i> , 3-yr. S, 5 to 10 ins.....	.08	.07	2000 <i>Taxus media</i> hicksii, 4-yr. TT, 10 to 12 ins.....	.40	.35
7000 <i>Pinus rigida</i> , 2-yr. S, 7 to 12 ins.....	.03	.02	5000 <i>Taxus media</i> hicksii, 6-yr. TT, 15 to 18 ins.....	.80	.75
2000 <i>Pinus rigida</i> , 3-yr. S, 8 to 16 ins.....	.04	.03	10,000 <i>Taxus media</i> hicksii, 3-yr. T, 12 to 15 ins.....	.30	.25
25,000 <i>Pinus strobus</i> , 3-yr. T, 3 to 5 ins.....	.08	.07	2000 <i>Taxus media</i> hicksii, 4-yr. TT, 10 to 12 ins.....	.40	.35
5000 <i>Pinus sylvestris</i> , 2-yr. S, 3 to 7 ins.....	.05	.04	5000 <i>Taxus media</i> hicksii, 6-yr. TT, 15 to 18 ins.....	.80	.75
4000 <i>Pinus sylvestris</i> , 3-yr. T, 4 to 9 ins.....	.09	.07	10,000 <i>Taxus media</i> hicksii, 3-yr. T, 12 to 15 ins.....	.30	.25
4500 <i>Pinus sylvestris</i> , 4-yr. T, 9 to 18 ins.....	.12	.10	2000 <i>Taxus media</i> hicksii, 4-yr. TT, 10 to 12 ins.....	.40	.35
5000 <i>Pinus thunbergii</i> , 1-yr. S.....	.03	.02½	5000 <i>Taxus media</i> hicksii, 6-yr. TT, 15 to 18 ins.....	.80	.75
1000 <i>Pseudotsuga douglasii</i> , 3-yr. S, 4 to 6 ins.....	.07	.06	10,000 <i>Taxus media</i> hicksii, 3-yr. T, 12 to 15 ins.....	.30	.25
5000 <i>Pseudotsuga douglasii</i> , 3-yr. T, 2 to 6 ins.....	.10	.09	2000 <i>Taxus media</i> hicksii, 4-yr. TT, 10 to 12 ins.....	.40	.35
1000 <i>Rhododendron</i> Hybrids (60 per cent red shades), pot grafts...	.75	..	5000 <i>Taxus media</i> hicksii, 6-yr. TT, 15 to 18 ins.....	.80	.75
500 <i>Rhododendron</i> , named varieties (red), pot grafts.....	.90	..	10,000 <i>Taxus media</i> hicksii, 3-yr. T, 12 to 15 ins.....	.30	.25

EVERGREEN LINING-OUT STOCK—Continued

	100 rate each	1000 rate each
1000 <i>Taxus media</i> Moon's Columnaris, 2-yr. T, 8 to 10 ins.	\$.30	\$.25
1000 <i>Taxus media</i> Moon's Columnaris, 3-yr. T, 9 to 12 ins.	.35	.30
2000 <i>Taxus media strobekeni</i> (new), (Fine pyramidal media type), 2-yr. T.	.40	.35
500 <i>Taxus Vermeulen</i> , 2-yr. T, 6 to 10 ins.	.30	..
5000 <i>Thuja occidentalis</i> , 2-yr. S.	.04	.03½
300 <i>Thuja occ. compacta</i> , 3-yr. T, 10 to 15 ins.	.35	.30
800 <i>Thuja occ. compacta</i> , TT, 8 to 10 ins.	.40	.35
1500 <i>Thuja occ. Columbia</i> (silver-tipped), T, 8 to 10 ins.	.25	.20
1000 <i>Thuja occ. Columbia</i> (silver-tipped), TT, 8 to 12 ins.	.30	.25
200 <i>Thuja occ. douglasii</i> (spiralis), 2-yr. T, 6 to 10 ins.	.30	.25
240 <i>Thuja occ. spiralis</i> , 10 to 12 ins., TT.	.45	.40
1000 <i>Thuja occ. pyramidalis</i> , pot grafts.	.35	..
2000 <i>Thuja occ. pyramidalis</i> , 2½-in. pots, 9 to 12 ins.	.25	.25
500 <i>Thuja occ. pyramidalis</i> , pot grafts.	.35	..
1500 <i>Thuja occ. pyramidalis</i> (transplanted grafts), 15 to 18 ins.	.30	.60

	100 rate each	1000 rate each
1000 <i>Thuja occ. umbraculifera</i> , 2-yr. T, 6 to 8 ins.	\$.20	..
1000 <i>Thuja occ. umbraculifera</i> , TT, 8 to 10 ins.	.30	\$.25
350 <i>Thuja occ. vernaeanana</i> , 2-yr. T, 8 to 10 ins.	.30	.25
1000 <i>Thuja occ. wareana</i> , 2-yr. T, 6 to 8 ins.	.30	.25
600 <i>Thuja occ. wareana</i> , TT, 8 to 12 ins.	.35	.30
500 <i>Thuja occ. wareana</i> , 2-yr. (transplanted grafts)	.60	..
1500 <i>Thuja occ. woodwardi</i> , 2-yr. T, 6 to 10 ins.	.25	.20
3000 <i>Thuja orientalis</i> , 1-yr. S.	.03	.02½
3000 <i>Thuja orientalis</i> , 2-yr. S, 6 to 10 ins.	.04	.03½
2000 <i>Thuja orientalis</i> , 3-yr. S, 12 to 18 ins.	.06	.05
500 <i>Thuja orientalis</i> , 4-yr. T, 12 to 20 ins.	.08	.07
1000 <i>Thuja orientalis aurea nana</i> , 2-yr. tr. grafts	.60	.50
1000 <i>Thuja plicata</i> , 2-yr. S, 6 to 8 ins.	.05	.04
5000 <i>Tsuga canadensis</i> (light), 2-yr. T, 6 to 10 ins.	.25	.20
*2000 <i>Tsuga canadensis</i> , 4-yr. TT, 10 to 12 ins.	.35	.30
*1700 <i>Tsuga canadensis</i> , 4-yr. TT, 12 to 18 ins.	.45	.40
1000 <i>Tsuga canadensis</i> , 4-yr. TT, 18 to 24 ins.	.65	.60
200 <i>Tsuga sargentii pendula</i> , pot grafts.	.75	..

(*) F.O.B. Indiana shipping point.

DECIDUOUS LINING-OUT STOCK

	100 rate each	1000 rate each
1000 <i>Acer dasycarpum</i> , 1-yr. S, 8 to 12 ins.	\$.06	\$.06
750 <i>Acer ginnala</i> , 2-yr. S, 8 to 12 ins.	.08	.06½
2000 <i>Acer palmatum</i> , 1-yr. S, 6 to 8 ins.	.08	.07
500 <i>Acer palmatum atropurpureum</i> , pot grafts	.75	..
500 <i>Acer palmatum atropurpureum</i> , (seed-grown), T, 9 to 12 ins.	.80	..
2000 <i>Ampelopsis veitchii</i> , 1-yr. S, No. 1.	.04	.03½
5000 <i>Ampelopsis veitchii</i> , 1-yr. S, No. 2.	.03	.02
1000 <i>Ampelopsis veitchii</i> , 2-yr. T.	.25	.20
1500 <i>Althaea</i> , 1-yr. S.	.04	.03
1000 <i>Azalea arnoldiana</i> , 1-yr. T, 6 to 9 ins.	.18	.18
2000 <i>Azalea kaempferi</i> , 1-yr. T, 6 to 9 ins.	.18	.18
1000 <i>Azalea poukhanensis</i> , 1-yr. T, 6 to 9 ins.	.18	.18
2000 <i>Berberis thunbergii</i> , 1-yr. S.	.01½	.01¼
5000 <i>Berberis thunbergii</i> , 2-yr. T, 9 to 12 ins.	.07½	.06½
5000 <i>Berberis thun. atropurpurea</i> , 1-yr. S, 9 to 12 ins.	.04	.02½
5000 <i>Berberis thun. atropurpurea</i> , 2-yr. T.	.10	.09
500 <i>Celastrus orbiculatus</i> , 1-yr. S.	.05	.04½
2000 <i>Celastrus scandens</i> , 1-yr. S, 4 to 6 ins.	.05	.04½
1000 <i>Cornus alba sibirica</i> , 2-yr. T, 6 to 10 ins.	.07½	.06
5000 <i>Cornus florida</i> (selected understocks), 12 to 18 ins.	.06	.05
1000 <i>Cornus florida rubra</i> , pot grafts.	.40	.37½
1000 <i>Cornus florida rubra</i> , 2-yr. T, grafts.	.125	1.00
5000 <i>Cornus kousa</i> , 1-yr. S.	.05	.04½
2000 <i>Cornus mascula</i> , 1-yr. S, 6 to 10 ins.	.05	.04
1000 <i>Cornus sanguinea</i> , 1-yr. S, 6 to 8 ins.	.05	.04½
1000 <i>Cornus stolonifera</i> , 2-yr. S, 6 to 10 ins.	.07½	.06
1000 <i>Cornus stolonifera lutea</i> , 2-yr. T, 6 to 10 ins.	.07½	.06
5000 <i>Cotoneaster acutifolia</i> , 1-yr. S, 2 to 4 ins.	.10	.09
1000 <i>Cotoneaster horizontalis</i> , 2½-in. pots.	.20	.18
5000 <i>Cydonia japonica</i> , 1-yr. S.	.05	.04
2000 <i>Cydonia japonica</i> (upright), 1-yr. S, 6 to 10 ins.	.09	.07½
1000 <i>Cydonia japonica</i> , 2-yr. T.	.12	.09½
2000 <i>Eleagnus angustifolia</i> , 1-yr. S, 8 to 12 ins.	.06	.05
500 <i>Enkianthus campanulatus</i> , 1-yr. T.	.18	..
2000 <i>Euonymus vegetus</i> , rooted cuttings.	.10	.09
500 <i>Fagus sylvatica purpurea</i> , 1-yr. S.	.15	..
5000 <i>Forsythia fortunei</i> , 2-yr. C, 12 to 15 ins.	.12	.10
1000 <i>Forsythia spectabilis</i> , 1-yr. C.	.06	.05
1000 <i>Hydrangea P.G.</i> , 2-yr. C, 6 to 8 ins.	.15	.12½
5000 <i>Koelreuteria paniculata</i> , 1-yr. S, 12 to 15 ins.	.08	.06
2000 <i>Kolkwitzia amabilis</i> , 1-yr. T, 6 to 12 ins.	.11	.10
2000 <i>Kolkwitzia amabilis</i> , 2-yr. T, 12 to 18 ins.	.20	.18
1000 <i>Laburnum vulgare</i> , 1-yr. S.	.08	.07½
250 <i>Laburnum vulgare</i> , 2-yr. T.	.12	..
2000 <i>Ligustrum ibota</i> , 2-yr. S, 6 to 12 ins.	.07½	.06½
2000 <i>Lonicera bella albida</i> , 1-yr. C, 8 to 12 ins.	.06	.05

	100 rate each	1000 rate each
800 <i>Lonicera grandiflora rosea</i> , 1-yr. C, 8 to 12 ins.	\$.06	\$.05
500 <i>Magnolia soulangeana</i> , pot grafts.	.60	..
500 <i>Magnolia soulangeana</i> , 1-yr. T, 12 to 18 ins.	1.00	..
200 <i>Magnolia stellata</i> , pot grafts.	.60	..
500 <i>Mulus</i> , assorted varieties, 1-yr. T, 18 to 24 ins.	..	.25
300 <i>Mulus</i> , assorted varieties, 2-yr. T, 2 to 3 ft.	.35	..
375 <i>Philadelphus Albatre</i> , 1-yr. C.	.06	..
3000 <i>Philadelphus coronarius aureus</i> , 2½-in. pots	..	.15
225 <i>Philadelphus Glacialis</i> , 1-yr. C.	.06	..
200 <i>Philadelphus virginialis</i> , 1-yr. T, 12 to 18 ins.	..	.18
400 <i>Philadelphus virginialis</i> , 1-yr. T, 18 to 24 ins.	..	.17½
400 <i>Philadelphus virginialis</i> , 1-yr. T, 2 to 2½ ft.	.25	.20
2000 <i>Prunus americana</i> , 1-yr. S, 12 to 18 ins.	.05	.04
1500 <i>Rhamnus cathartica</i> , 1-yr. S, 6 to 8 ins.	.05	.04
2000 <i>Rosa rubrifolia</i> , 2-yr. T, 6 to 10 ins.	.08	.06
4000 <i>Rosa rugosa</i> , 1-yr. S, 2 to 4 ins.	.05	.04
1500 <i>Rosa rugosa</i> , 2-yr. T, 10 to 12 ins.	.08	.07½
2000 <i>Rosa rugosa alba</i> , 1-yr. S, 2 to 4 ins.	.10	.09
2000 <i>Rosa setigera</i> , 1-yr. S, 6 to 10 ins.	.06	.04
500 <i>Salix blanda</i> , 1-yr. S, 3 to 4 ft.	.08	.07½
500 <i>Sophora japonica</i> , 1-yr. S.	.10	.09
2000 <i>Sorbus aucuparia</i> , 1-yr. S.	.06	.05
400 <i>Spiraea Anthony Waterer</i> , 2-yr. C, 6 to 8 ins.	.15	.12½
700 <i>Spiraea arguta</i> , 2-yr. C, 8 to 10 ins.	.15	.12½
400 <i>Spiraea callosa alba</i> , 2-yr. C, 3 to 5 ins.	.12	.10
3000 <i>Syringa pekinensis</i> , 1-yr. S, 2 to 4 ins.	.06	.05
500 <i>Syringa</i> , named hybrids, 1-yr. grafts.	.25	..
200 <i>Syringa</i> , named hybrids, 2-yr. grafts.	.35	..
1000 <i>Tamarix africana</i> , 1-yr.	.06	.05
3000 <i>Viburnum americanum</i> , 2-yr. S, 10 to 14 ins.	.10	.08
500 <i>Viburnum burkwoodii</i> , pot grafts.	.40	..
2000 <i>Viburnum burkwoodii</i> , 2½-in. pots.	.30	.25
1000 <i>Viburnum carlesii</i> , pot grafts.	.40	..
3000 <i>Viburnum dilatatum</i> , 1-yr. S.	.06	.05
1000 <i>Viburnum lantago</i> , 2-yr. S, 4 to 8 ins.	.10	.08
1500 <i>Viburnum pubescens</i> , 2-yr. T, 6 to 10 ins.	.12	.10
3000 <i>Viburnum sieboldii</i> , 1-yr. S, 4 to 6 ins.	.06	.05
3000 <i>Weigela Bristol Ruby</i> (patented), R. C. or 2½-in. pots.	.25	.22½
2000 <i>Weigela rosea</i> , 1-yr. C.	.08	..
500 <i>Wistaria sinensis</i> , 1-yr. purple, grafts.	.20	..
5000 <i>Vaccinium</i> (Hybrid Blueberries), rooted cuttings	..	.15
Varieties: <i>Concord</i> , <i>Rubel</i> , <i>Pioneer</i> , <i>Rancocas</i> , <i>Jersey</i> , <i>Stanley</i> , at above prices. These varieties 10¢ each higher: <i>Weymouth</i> , <i>Atlantic</i> , <i>Pemberton</i> , <i>Dixie</i>.	..	.10

Please note—All pot grafts will be ready for shipment early May, 1950, at proper time.

All the above is grown by our best growers of lining-out material. All F.O.B. shipping points, packing additional at cost. Usual terms to trade accounts. The above is listed subject to prior sale and subject to usual trade terms as mentioned in our trade lists.

E. D. ROBINSON SALES AGENCY

38 South Elm St.

"A friendly, efficient service"

Wallingford, Conn.

LINING-OUT STOCK—SPRING, 1950

1,000,000 Transplanted Liners, well grown, hardy stock.

Heavy liners from field beds of 1, 2 and 3-year plantings. X indicates times transplanted, 25 of a kind at 100 rate; 300 of a kind at 1000 rate. Shipped express or parcel post. Terms: Cash with order and packing free; otherwise 1/3 deposit, balance C.O.D., and packing charged at cost. Japanese beetle certification provided upon request. Write for our latest listing of nursery stock. Ready now.

	100	1000
	rate	rate
	each	each
Althaea (<i>Hibiscus Syriacus</i>), Rose of Sharon, 5 to 10 ins., adig., 1-yr.	.00	.02
Althaea (<i>Hibiscus Syriacus</i>), Rose of Sharon, 10 to 20 ins., adig., 2-yr.	.05	.03
Azalea Ghent, 6 to 9 ins., XXX, 3-yr.	.45	..
Azalea Ghent, 9 to 12 ins., XXX, 3-yr.	.65	..
Azalea mollis, 2 to 5 ins., X, 1-yr.	.15	.12
Azalea mollis, 5 to 10 ins., X, 2-yr.	.25	.22
Azalea mollis, 6 to 9 ins., XX, 3-yr. branched.	.45	.40
Azalea mollis, 9 to 12 ins., XX, 3-yr. branched (B&B add 25c)	.65	..
Azalea mollis, 12 to 15 ins., XX, 3-yr. branched (B&B add 25c)	.90	..
Azalea mollis, 15 to 18 ins., XX, 3-yr.	1.25	..
Azalea kaempferi hyb., 4 to 6 ins., XX, 3-yr.	.25	..
Azalea kaempferi hyb., 6 to 9 ins., XX, 3-yr.	.35	..
Azalea kaempferi hyb., 9 to 12 ins., XX, 3-yr.	.45	..
Berberis thun. atropurpurea, 8 to 12 ins., X, 2-yr.	.17	..
Buxus sempervirens, 4 to 8 ins., XX, 2-yr.	.18	..
Buxus welleri, 2 to 5 ins., X, 1-yr.	.18	..
Buxus welleri, 4 to 8 ins., 2-yr.	.25	..
Calycanthus floridus, 4 to 10 ins., adig.	.05	.04
Chamaecyparis lawsoniana, 8 to 12 ins., adig., 2-yr.	.10	.08
Chamaecyparis law. allumi, X, 6 to 10 ins., 1-yr.	.15	.13
Chamaecyparis law. allumi, X, 10 to 15 ins., 2-yr.	.20	.18
Chamaecyparis law. allumi, X, 15 to 20 ins., X, 1-yr.	.15	.12
Chamaecyparis filifera aurea, 6 to 10 ins., XX, 2-yr.	.25	..
Chamaecyparis pisifera aurea, 6 to 10 ins., X, 1-yr.	.15	.12
Cytisus purpureus, Scotch Broom, X, 2-yr.	.15	.12
Elaeagnus angustifolia, adig., 1-yr.	.05	..
Euonymus carrierei, 4 to 8 ins., X, 1-yr.	.10	.08
Euonymus carrierei, 6 to 10 ins., XX, 2-yr.	.15	.12
Euonymus carrierei, 9 to 12 ins., XXX, 3-yr. cutback	.25	.20
Euonymus coloratus, 4 to 6 ins., X, 1-yr.	.10	.08
Euonymus coloratus, 6 to 12 ins., XX, 2-yr.	.18	.16
Euonymus fortunei erectus, 4 to 8 ins., X, 1-yr.	.10	.08
Euonymus fortunei erectus, 8 to 12 ins., XX, 2-yr.	.18	.15
Euonymus patens, 4 to 8 ins., X.	.12	..
Euonymus vegetus, 4 to 8 ins., X.	.12	..
Ilex crenata, 3 to 6 ins., X, 1-yr.	.12	.11
Ilex crenata, 6 to 9 ins., XX, 2-yr.	.17	..
Ilex crenata bullata, Convex Leaf Holly, 4 to 6 ins., X.	.18	.16
Ilex crenata bullata, Convex Leaf Holly, 6 to 8 ins., XX, 2-yr.	.25	..
Ilex crenata bullata, Convex Leaf Holly, 8 to 12 ins., XXX, 3-yr.	.45	..
Ilex glabra, 4 to 6 ins., X.	.18	.16
Ilex glabra, 8 to 10 ins., XX, 3-yr.	.30	..
Ilex rotundifolia, 3 to 5 ins., X, 1-yr.	.13	.12
Ilex rotundifolia, 4 to 6 ins., XX, 2-yr.	.18	.16
Ilex rotundifolia, 6 to 8 ins., XX, 2-yr.	.24	..
Ilex rotundifolia, 8 to 12 ins., XXX, 3-yr.	.60	..
Juniper, Andorra, 6 to 9 ins., X, 1-yr.	.17	.15
Juniper, Andorra, 6 to 9 ins., XX, 2-yr.	.24	.22
Juniper, Irid., 8 to 12 ins., XX, 2-yr.	.17	.15
Juniper, Irid., 8 to 12 ins., X, 1-yr.	.24	.22
Juniper communis depressa plumosa aurea, 4 to 6 ins., X, 1-yr.	.15	..
Juniperus glauca hetzii, 6 to 8 ins., X, 1-yr.	.17	.15
Juniperus glauca hetzii, 8 to 10 ins., X, 1-yr.	.22	.20
Juniperus glauca hetzii, 8 to 12 ins., XX, 2-yr.	.25	..
Juniperus glauca hetzii, 12 to 15 ins., XX, 2-yr.	.35	..
Juniperus horizontalis glauca, 6 to 8 ins., X, 1-yr.	.15	..
Juniperus horizontalis glauca, 8 to 12 ins., XX, 2-yr.	.20	.18
Juniperus pfitzeriana Hill's Golden, 5 to 8 ins., X.	.30	..
Juniperus virginiana, 8 to 12 ins., adig., 2-yr.	.07	.06
Koelreuteria paniculata, Golden Raintree, 4 to 8 ins., adig., 1-yr.	.10	..
Larix europaea, 6 to 12 ins., X, 2-yr.	.10	.08
Leucothoe catesbeiana, 4 to 6 ins., X, 1-yr.	.15	.13
Leucothoe catesbeiana, 6 to 12 ins., XX, 2-yr.	.25	.22
Liquidambar styraciflua, Sweet Gum, 6 to 10 ins., adig., 1-yr.	.04	.03
Myrsinaceae, coriifolia, adig., 1-yr.	.10	..
Picea excelsa, 4 to 8 ins., X, 2-yr.	.12	..
Pieris floribunda, 6 to 10 ins., XX, 3-yr.	.35	..
Pieris floribunda, 10 to 15 ins., XX, 3-yr.	.50	..
Pieris japonica, Japanese Pieris, 6 to 8 ins., XX, 3-yr.	.45	..
Pieris japonica, Japanese Pieris, 8 to 12 ins., XXX, 3-yr.	.65	..
Pieris japonica, Japanese Pieris, 12 to 15 ins., XXX, 3-yr.	1.00	..
Pieris mariana, 8 to 10 ins., XX, 3-yr.	.65	..
Pieris mariana, 10 to 15 ins., XX, 3-yr.	.90	..
Pinus montana mugo, 2 to 5 ins., adig., 2-yr.	.05	.04
Quercus palustris, Pin Oak, 4 to 6 ins., adig., 1-yr.	.08	.06
Quercus palustris, Pin Oak, 6 to 12 ins., adig., 1-yr.	.12	.10
Rhododendron carolinianum, 8 to 12 ins., XXX, 4-yr.	1.00	..
Rhododendron carolinianum, 9 to 15 ins., XXX, 4-yr.	.85	.70
Rhododendron hybrid, 12 to 15 ins., XXX, 4-yr. (B&B add 25c)	1.50	..
Rhododendron hybrid, 15 to 18 ins., (B&B add 25c)	2.25	..
Taxus baccata, 3 to 6 ins., X, 1-yr.	.14	.12
Taxus baccata, 6 to 8 ins., X, 1-yr.	.18	.16
Taxus capitata, 4 to 6 ins., XX, 2-yr.	.18	.15
Taxus capitata, 6 to 8 ins., XX, 2-yr.	.25	..
Taxus capitata, 8 to 12 ins., XX, 3-yr.	.35	..
Taxus cuspidata, 3 to 6 ins., X, 1-yr.	.12	.11
Taxus cuspidata, 6 to 9 ins., X, 1-yr.	.15	.12
Taxus cuspidata, 6 to 9 ins., XX, 2-yr.	.20	.18
Taxus cuspidata, 8 to 10 ins., XX, 3-yr.	.28	..
Taxus cuspidata, 10 to 15 ins., XX, 3-yr.	.35	..
Taxus media batfieldii, 3 to 6 ins., X, 1-yr.	.14	.12
Taxus media batfieldii, 3 to 6 ins., X, 1-yr.	.14	.12
Taxus media hicksonii, 3 to 8 ins., X, 1-yr.	.18	.16
Thuya occidentalis, 4 to 8 ins., 2-yr.	.08	.06
Thuya occ. ellwangeriana, 6 to 9 ins., XX, 2-yr.	.15	..
Thuya occ. elegantissima Geo. Peabody, 4 to 6 ins., X, 1-yr.	.14	.12
Thuya occ. elegantissima Geo. Peabody, 6 to 9 ins., X, 1-yr.	.18	.16
Thuya occ. globosa, 6 to 8 ins., XX, 2-yr.	.18	.16
Thuya occ. globosa nana, 2 to 5 ins., X, 1-yr.	.15	.13
Thuya occ. Hill's Golden, 4 to 6 ins., X, 1-yr.	.18	.16
Thuya occ. plicata, 6 to 9 ins., XX, 2-yr.	.18	..
Thuya occ. pyramidalis, 4 to 6 ins., X, 1-yr.	.15	.13
Thuya occ. pyramidalis, 6 to 8 ins., X, 1-yr.	.20	.18
Thuya orientalis, Oriental Arborvitae, 4 to 8 ins., adig., 1-yr.	.05	.03
Thuya orientalis, Oriental Arborvitae, 6 to 9 ins., adig., 2-yr.	.08	.06
Tsuga canadensis, 12 to 15 ins., XXX, 5-yr., (B&B add 25c)	.65	..

PALLACK BROS. NURSERIES, Inc.

(On Highway 19, 31 mi. north of Pittsburgh, Pa.)

R.F.D. 1

Phone: Zellenope 476-21

HARMONY, PA.

spoken of as a small version of barbata.

Actually, though, *C. alpina* differs from the other in many ways, not the least conspicuous being the absence of a bearded corolla and its smaller stature, the latter seldom exceeding three or four inches. It is a beautiful plant from its tiny dense tufts of hairy gray leaves to its string of blue (blue-purple to some) dangling bells during two months or more, commencing in this climate in May. It is spoken of in the books as being "easy in cultivation" according to the Cyclopaedia of Horticulture, and "a very good little doer—a lime lover of quite easy cultivation," according to Farrer. In my experience *alpina* seemed in about the same class as *barbata*, except that it always needed more moisture during the growing season.

Rodgersia.

It will take not a little searching to find a single source of supply for a *rodgersia* in this country. And that is all the more surprising when we remember how popular are its close relatives, the astilbes. To my knowledge, at least two species, *R. pinnata* and *R. podophylla*, are desirable candidates for a place among the elect, tall-growing border plants in sections where they are hardy. Both grow from three to four feet tall, the first with leaves pinnate in the form of a hand, each leaflet one-half foot or more in length, and branched panicles of small white flowers. The latter has peltately 5-foliate leaves, as much as fifteen inches, and fluffy panicles of whitish flowers, on the order of the forcing astilbes.

R. podophylla winterkilled here during a cold winter, but *R. pinnata* went through the same ordeal unscathed. It is not apparent, though, from the literature just how much cold they can stand. It is not unlikely that trial would show that *R. pinnata* at least would be hardy in all except the coldest parts of the country.

The *rodgersias* are said to grow naturally in moist situations, and we found that to be true here. However, they do make quite satisfactory growth in ordinary border soil which has been thoroughly enriched with well rotted manure and peat. The character of the foliage requires some protection from strong winds if it is to remain unblemished throughout the season. Incidentally, the leaves, which assume tints of bronze before summer is gone, are their chief merit. *Rodgersias* are quite easy to propagate.

[Continued on page 61.]

J E W E L L

Headquarters for Hardy Northern-grown Nursery Stock at **WHOLESALE**

We list below a few items from our Complete List.

FLOWERING SHRUBS

	Per 10	Per 100	Per 1000	
Almond, Pink-flowering				
450 12 to 18 ins.	\$2.80	\$25.00	.....
970 18 to 24 ins.	4.00	35.00	.....
200 2 to 3 ft.	5.00	45.00	.....
Barberry, Red-leaved				
900 12 to 15 ins.	2.50	22.00	.....
650 15 to 18 ins.	3.20	28.00	.....
700 18 to 24 ins.	4.00	35.00	.....
Barberry, Green				
2100 15 to 18 ins.	2.40	20.00	\$160.00	
2900 18 to 24 ins.	3.00	25.00	200.00	
Buddleia Charming				
1800 No. 1	2.80	25.00	200.00	
Buddleia Dubonnet				
900 No. 1	2.80	25.00	.....
Buddleia Eleanor				
700 No. 1	2.80	25.00	.....
Buddleia Empire Blue (Plant Patent 557)				
1500 No. 1	4.00	35.00	300.00	
Buddleia Ile de France				
600 No. 1	2.80	25.00	.....
Buddleia White Cloud				
800 No. 1	2.80	25.00	.....
Caryopteris Blue Spires				
1000 18 to 24 ins.	2.80	25.00	200.00	
Forsythia Fortunei				
350 2 to 3 ft.	3.50	30.00	.....
450 3 to 4 ft.	4.00	35.00	.....
Forsythia Spectabilis				
1300 18 to 24 ins.	2.50	22.00	180.00	
500 2 to 3 ft.	3.50	30.00	.....
400 3 to 4 ft.	4.00	35.00	.....
Honeysuckle, Zabeli				
2200 2 to 3 ft.	3.20	28.00	240.00	
Lilac, Common Purple				
400 12 to 18 ins.	2.00	18.00	.....
750 18 to 24 ins.	3.00	25.00	.....
Lilac, Persian Purple				
3600 2 to 3 ft.	3.50	30.00	250.00	
Lilac, Persian White				
500 2 to 3 ft.	4.00	35.00	.....
Philadelphus Bouquet Blanc				
580 2 to 3 ft.	4.00	35.00	.....
Philadelphus Virginialis				
300 2 to 3 ft.	5.50	50.00	.....
220 3 to 4 ft.	6.50	60.00	.....
Spiraea Arguta				
300 18 to 24 ins.	2.50	22.00	.....
800 2 to 3 ft.	3.50	30.00	.....
Spiraea Froebeli				
2300 12 to 18 ins.	2.00	18.00	160.00	
Spiraea Menziesii				
1000 2 to 3 ft.	3.50	30.00	250.00	
Spiraea Prunifolia				
500 2 to 4 ft.	4.50	40.00	

FLOWERING SHRUBS—Continued

	Per 10	Per 100	Per 1000	
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Tamarix Hispida	1000 2 to 3 ft.	\$3.20	\$28.00	\$240.00
	1700 3 to 4 ft.	4.00	35.00	300.00

Weigela Bristol Ruby	(Plant Patent 492)			
	150 2 to 3 ft.	7.00	60.00	.....
	350 3 to 4 ft.	9.00	80.00	.....

Weigela Rosea	600 2 to 3 ft.	3.50	30.00
	390 3 to 4 ft.	4.50	40.00

ORNAMENTAL TREES

	Per 10	Per 100	Per 1000	
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Crab, Hopa	420 2 to 3 ft.	\$ 4.00	\$ 35.00
	200 3 to 4 ft.	5.00	45.00
	300 4 to 5 ft.	6.50	60.00

Crab, Red Silver	200 3 to 4 ft.	5.00	45.00
	100 4 to 5 ft.	6.50	60.00	.....

Poplar, Lombardy	2400 6 to 8 ft.	4.00	35.00	\$300.00
	1500 8 to 10 ft.	6.00	50.00	450.00

Prunus Newport (Bush form)	500 3 to 4 ft.	7.00	65.00	.....
	900 3 to 4 ft.	7.00	65.00	.....

Prunus Tomentosa	480 2 to 3 ft.	5.00	45.00	.....
	1250 3 to 4 ft.	8.50	80.00	750.00

Prunus Triloba	100 4 to 5 ft.	10.00	90.00	.....
	1250 3 to 4 ft.	8.50	80.00	750.00

Willow, Niobe Weeping	300 5 to 6 ft.	6.00	50.00	.....
	400 6 to 8 ft.	9.00	80.00	.....
	250 8 to 10 ft.	12.00	100.00	.....

Willow, Wisconsin Weeping	400 5 to 6 ft.	6.00	50.00
	750 6 to 8 ft.	8.00	70.00

PERENNIALS

	Per 10	Per 100	Per 1000	
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Bleeding Heart	1900 2 to 3 eye.	\$2.50	\$20.00	\$175.00
	3000 3 to 5 eye.	3.50	30.00	250.00
	1400 5 to 8 eye.	4.00	35.00	300.00

Dictamnus, Pink	1200 2-year	2.00	18.00	160.00
	900 No. 1	4.00	35.00	.....

Gypsophila Bristol Fairy	7500 No. 1	1.80	15.00	120.00
	900 No. 1	4.00	35.00	.....

All the above-quoted stock is in storage and available for immediate delivery.

Our complete list is available covering our complete line for delivery in the spring of 1950.

Write for catalog.

JEWELL NURSERIES, Inc.

BOX 457

LAKE CITY, MINN.

Coming Events

MEETING CALENDAR.

January 15 to 17, Executive Committee, American Association of Nurserymen, Hotel La Salle, Chicago.

January 16, National Landscape Nurserymen's Association, Hotel La Salle, Chicago.

January 16, National Mail Order Nurserymen's Association, Hotel La Salle, Chicago.

January 16, All-America Rose Selections, Inc., Hotel La Salle, Chicago.

January 16 to 18, Idaho Nurserymen's Association, Boise.

January 17 to 19, Illinois State Nurserymen's Association, Hotel La Salle, Chicago.

January 20, Western New York Nurserymen's Association, Hotel Seneca, Rochester.

January 23 and 24, Washington State Nurserymen's Association, Davenport hotel, Spokane.

January 23 to 25, Short Course for Nurserymen, Landscape Gardeners and Arborists, Neil House, Columbus, O.

January 25, New Jersey Association of Nurserymen, Hotel Hildebrandt, Trenton.

January 25 and 26, Pennsylvania Nurserymen's Association, Bellevue Stratford hotel, Philadelphia.

January 25 to 27, Indiana Arborists' Association, Purdue University, West Lafayette.

January 26 and 27, Ohio Nurserymen's Association, Neil House, Columbus.

January 29 to 31, Virginia Nurserymen's Association, Hotel John Marshall, Richmond.

February 1 to 3, Michigan Association of Nurserymen, Fort Shelby hotel, Detroit.

February 1 and 3, Tennessee State Nurserymen's Association, Andrew Johnson hotel, Knoxville, and nurserymen's short course at the University of Tennessee, Knoxville.

February 2, Oregon Association of Nurserymen, Heathman hotel, Portland.

February 6 and 7, Kentucky State Nurserymen's Association, Lafayette hotel, Lexington.

February 7, Massachusetts Nurserymen's Association, Hotel Kenmore, Boston.

February 7 to 9, New England Nurserymen's Association, Hotel Kenmore, Boston.

February 15, Rhode Island Nurserymen's Association, Newport.

February 15 to 19, Midwestern Chapter of National Shade Tree Conference, Hotel La Salle, Chicago.

February 21 to 23, Pennsylvania Nurserymen's Conference, State College, Pa.

February 27 to March 10, Landscape short course, Virginia Polytechnic Institute, Blacksburg.

ILLINOIS SPEAKER.

The program for the convention of the Illinois State Nurserymen's Association, January 17 to 19 at the Hotel La Salle, Chicago, is now complete with the announcement that the speaker for the luncheon January 19 will be Howard Wilson, sales promotion division, Ruthrauff & Ryan, Inc., well known Chicago advertising agency. Mr. Wilson's talk

will be entitled "Action Is Power." The full convention program was published in preceding issues.

KENTUCKY DATES.

The Kentucky State Nurserymen's Association will hold its annual meeting February 6 and 7 at the Lafayette hotel, Lexington, Secretary Howard G. Tilson announces.

WASHINGTON PROGRAM.

At the midwinter meeting of the Washington State Nurserymen's Association, January 23 and 24 at the Davenport hotel, Spokane, several speakers from Washington and Oregon are to discuss various ways of improving the nursery business. C. B. Miller, Milton Nursery Co., Milton, Ore., and Wayne McGill, A. McGill & Son, Fairview, Ore., will discuss some better varieties of shade trees and shrubs. Wayne Melton, Carlton Nursery Co., Forest Grove, Ore., will discuss improved forms of fruit trees and small fruits and Larry Krause, Spokane, will discuss better varieties of evergreens and broad-leaved plants. Other subjects to be treated will be "Better Roses," "Better Publicity" and "Better Merchandising."

Also on the program is Harold Abbott, of the Spokane park board. Mr. Abbott is currently developing

an arboretum at Spokane and will outline progress on this work. O. B. Howell, garden editor of the Spokesman-Review, one of Spokane's newspapers, will give some viewpoints on relationships between newspapers and nurserymen. A. Edward Balzer, nurseryman at Spokane, will discuss the plant patent situation.

Registration is planned for 8 a. m. January 23, and the program will start at 9 o'clock, with President Frank Stanek, Stanek & Son, Spokane, opening the meeting. Part of the first day will be given to a meeting of Washington chapter 28 of the American Association of Nurserymen. The program for the morning of January 24 will be under the direction of Dr. T. W. Merrill, head of the department of horticulture, Washington State College, Pullman. In the afternoon the group will tour the Kaiser aluminum mill at Trentwood.

PENNSYLVANIA PROGRAM.

The annual meeting of the Pennsylvania Nurserymen's Association is being planned for January 25 and 26 at the Bellevue-Stratford hotel, Philadelphia, not for February 2 and 3, as was erroneously stated in preceding issues.

Jesse R. S. Flory, chairman of the

CHOICE ITEMS

	Each	per 100
50 <i>Cotoneaster Apiculata</i> , 15 to 18 ins.		\$1.50
500 <i>Azalea Mollis</i> , named, 12 to 15 ins.		1.75
30 <i>Ginkgo</i> , 8 to 10 ft.		3.00
15 <i>Cornus Kousa Chinensis</i> , 3 to 4 ft.		4.00
15 <i>Cornus Florida Plena</i> , 2½ to 3 ft.		2.50
400 <i>Cornus Florida</i> , 1-yr. S.		.06
15 <i>Cornus Florida</i> , 7 to 9 ft.		7.00
150 <i>Cornus Florida Rubra</i> , 16 to 24 ins.		1.00
150 <i>Franklinia A.</i> , 10 to 14 ins., T.		.50
500 <i>Taxus Capitata</i> , 2-yr. S.		.12
1000 <i>Ilex Convexa</i> , S.	50¢ each per 1000	
10 <i>Magnolia Lennsei</i> , 4 to 5 ft.		7.00
25 <i>Celastrus scandens</i> , 2 to 3 ft.		.50
100 <i>Peony</i> , high-rated, boxed.		1.50
Other choice items. Cash with order.		
50 at 100 rate; 500 at 1000 rate.		

BRIMFIELD GARDENS NURSERY
245 BRIMFIELD RD.
WETHERSFIELD, CONN.

"SPECIALS" FROM OUR NEW LIST

JUNIPER, PFITZER, STRICTA

1-yr. liners, TT, bed-grown.

	Per 100
4 to 6 ins., B.R.	\$18.00
6 to 8 ins., B.R.	25.00

KOSTER NURSERY

BRIDGETON, N. J.

ORNAMENTAL EVERGREENS

Trees & Shrubs

BAGATELLE NURSERY
P. O. Huntington Station, N. Y.

THUJA OCCIDENTALIS COMPACTA ERECTA (NEW)

We offer this new variety in rooted cuttings; also established stock from 2½-in. pots.

Write for descriptive folder in color.

THE WESTMINSTER NURSERIES
WESTMINSTER, MD.

NEW IDEA

transplanters

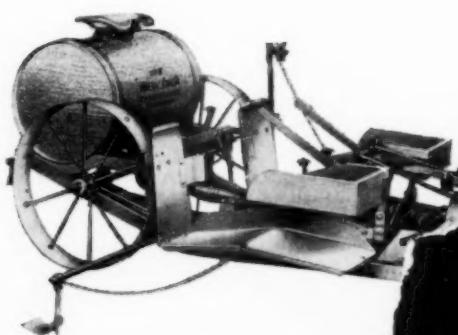


save time and labor — produce better crops

With the NEW IDEA Transplanter, a crew of three easily sets as many plants per day as *sixteen* hand workers. The transplants are evenly spaced at correct depth, with roots properly spread and watered.

The soil is uniformly firmed and mulched around them, the fertilizer correctly placed. Crops set out the NEW IDEA way take hold faster and grow more vigorously—mature earlier and yield better.

Comfortable, safe, convenient. Pulled by either team or tractor. Handles tomatoes, tobacco, cabbage, peppers, sweet potatoes, strawberries and all similar transplantable crops. Fertilizer attachment available. Ask your NEW IDEA dealer about this modern



77 YEARS



2-year budded Pear photographed in our fields Aug. 2, 1949.

The production of fruit trees has been a specialty with Willis since 1872.

Apples and Crab Apples

Two-year Grafts

	Per 100	Per 1000
11/16-in. up, 4 1/2 ft. up...	\$45.00	\$400.00
9/16 to 11/16-in., 4 ft. up...	35.00	300.00
7/16 to 9/16-in., 3 ft. up...	28.00	250.00
5/16 to 7/16-in., 2 ft. up...	22.00	200.00
Anoka	McIntosh, Dk. Red	
Beacon	McIntosh, Early	
Delicious, Dk. Red	Red Rome Beauty	
Delicious, Yellow	Red Bird	
Deluxe	Stayman, Dk. Red	
Duchess, Red	Transcendent Crab	
Haralson	Turley	
Hyslop Crab	Wealthy	
John's Crab	Whitney Crab	
Jonathan	Winesap	
Jonathan, Dk. Red	York Imperial	

Peaches

One-year Buds

	Per 100	Per 1000
11/16-in. up, 4 1/2 ft. up...	\$50.00	\$400.00
9/16 to 11/16-in., 4 ft. up...	40.00	300.00
7/16 to 9/16-in., 3 ft. up...	35.00	220.00
5/16 to 7/16-in., 2 ft. up...	18.00	150.00
Belle of Georgia		

Apricots

One-year

	Per 100	Per 1000
11/16-in. up, 4 1/2 ft. up...	\$80.00	\$750.00
9/16 to 11/16-in., 4 ft. up...	65.00	600.00
7/16 to 9/16-in., 3 ft. up...	50.00	450.00
5/16 to 7/16-in., 2 ft. up...	35.00	300.00

Cherries, Sour

Early Golden

	Per 100	Per 1000
11/16-in. up, 3 1/2 ft. up...	\$85.00	\$800.00
9/16 to 11/16-in., 3 ft. up...	75.00	700.00
7/16 to 9/16-in., 2 1/2 ft. up...	60.00	...
5/16 to 7/16-in., 2 ft. up...	45.00	...

Cherries, Sweet

Mostly Whips

	Per 10	Per 100
11/16-in. up, 4 1/2 ft. up...	\$12.00	\$110.00
9/16 to 11/16-in., 4 ft. up...	9.50	90.00
7/16 to 9/16-in., 3 ft. up...	7.50	70.00
Napoleon		

program committee, announces that the theme of the convention will be changing times, both as they affect the general business picture and the individual nurseryman. Activities will begin at 9 a. m. Wednesday with registration, and from 9:30 to 11:45 a. m. there will be an open forum, led by John Stoudt, Farr Nursery Co., Weiser Park, at which everyone will have the opportunity to express his views on topics of general interest. At the group luncheon the association will hear an address of welcome by Philadelphia's mayor or his representative.

The afternoon session will begin with a general business meeting, after which Curtis Porterfield, administrative assistant, American Association of Nurseryman, will report from Washington, D. C., headquarters. Known for his ability to present the technical subject of economics and marketing to the layman in an understandable manner, Dr. Myron S. Heidingsfield, professor of marketing, Temple University, will discuss "Changing Times in Business." To conclude the session, Dr. Joseph E. Howland, garden editor of House Beautiful magazine, New York, will discuss changing approaches to architecture, entitling his talk "Modern Gardens Are To Be Lived In, Not Just Looked At." The annual banquet will be held at 6:30, and a program of outstanding talent is being arranged.

From 9:30 to 11 a. m. Thursday the association will hold a business meeting. Afterward it will hear Harry Raben, of Goldfarb Flower Shops, Inc., New York, discuss "The Retail Merchandising Outlook for 1950." The meeting will be reconvened after luncheon to finish the business agenda.

OHIO PROGRAM.

The Ohio Nurserymen's Association will hold its forty-third annual convention January 26 and 27 at the Neil House, Columbus, immediately following the 3-day short course for nurserymen, landscape gardeners and arborists, which is sponsored annually by Ohio State University.

The convention will open with a business meeting at 10 a. m. Thursday. In the afternoon, starting at 2 p. m., John W. Baringer, chief of the Ohio division of plant industry, will report on the activities of his division. Prof. F. L. O'Rourke, department of horticulture, Michigan State College, East Lansing, will present a paper entitled "Propagation of Clonal Selections," and "The Nursery Outlook Across the Nation" will be discussed by R. P. White,

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2% cash discount for orders up to **\$1,500.00** from now to June 1, 1950
 5% cash discount for orders of **\$1,500.00** and more from now to June 1, 1950
 10% cash discount for orders of **\$2,500.00** and more from now to June 1, 1950

*BERBERIS ATROPURPUREA.

Red Barberry.

	Per 100	Per 1000
2-yr. trans.		
15 to 18 ins.	\$25.00	\$200.00
18 to 24 ins.	30.00	250.00

*BERBERIS ATROPURPUREA.

Red Barberry.

	60.00
12 to 15 ins.	
15 to 18 ins.	80.00
18 to 24 ins.	100.00

*BERBERIS THUNBERGII.

Green Barberry.

	20.00	150.00
12 to 15 ins.		
15 to 18 ins.	25.00	200.00
18 to 24 ins.		

*BERBERIS THUNBERGII.

Green Barberry.

	50.00
12 to 15 ins.	
15 to 18 ins.	60.00
18 to 24 ins.	80.00

Write for special quantity prices on 10,000 and up.

*TSUGA CANADENSIS, Specimens.

Canada Hemlock.

	per 10	per 100
2 to 3 ft., B&B, heavy	\$2.60	\$2.50
3 to 4 ft., B&B, heavy	3.60	3.50
4 to 5 ft., B&B, heavy	5.10	5.00

*THUJA NIGRA.

Black American Arborvitae.

	2.10	2.00
2 to 3 ft.		
3 to 4 ft.	3.10	3.00

*THUJA OCCIDENTALIS PYRAMidalis.

Pyramidal Arborvitae.

	2.10	2.00
2 to 3 ft., B&B		
3 to 4 ft., B&B	2.60	2.50
4 to 5 ft., B&B	3.10	3.00
5 to 6 ft., B&B	4.10	4.00

*THUJA OCCIDENTALIS.

American Arborvitae.

	2.10	2.00
3 to 4 ft., B&B		
4 to 5 ft., B&B	3.10	3.00

*THUJA OCCIDENTALIS GLOBOsa.

Globe Arborvitae.

	1.60	1.50
18 to 24 ins., B&B		
24 to 30 ins., B&B	1.85	1.75

*TAXUS CUSPIDATA CAPITATA.

Each	Each
Upright Yew.	
24 to 30 ins., B&B	\$ 4.10
30 to 36 ins., B&B	5.10
36 to 42 ins., B&B	6.10
42 to 48 ins., B&B	10.00
	...

*TAXUS CUSPIDATA.

Spreading Yew.	
*18 to 24 ins., B&B	3.10
24 to 30 ins., B&B	4.10

*TAXUS HICKSI.

Hicks' Yew.	
24 to 30 ins.	4.10
30 to 36 ins.	5.10

*TAXUS HATFIELDI.

Hatfield Yew.	
24 to 30 ins.	4.10

*TAXUS INTERMEDIA.

Spreading Yew.	
18 to 24 ins., spread	3.60
24 to 30 ins., spread	4.60

*RETINOSPORA PLUMOSA.

Plumosa.	
18 to 24 ins., B&B	1.60
24 to 30 ins., B&B	2.10
30 to 36 ins., B&B	2.60

*RETINOSPORA PLUMOSA AUREA.

Plumosa Aurea.	
18 to 24 ins., B&B	1.60
24 to 30 ins., B&B	2.10
30 to 36 ins., B&B	2.60

RHODODENDRON CATAWBIENSE.

18 to 24 ins.	
18 to 24 ins.	3.10

RHODODENDRON MAXIMUM.

18 to 24 ins.	
18 to 24 ins.	3.10

BLUEBERRY.

Cabot.	
2 to 3 ft.	2.10
Rubel.	
2 to 3 ft.	2.10

All items starred () can be certified for western shipment.

All Evergreens B&B at List Prices.
 NO BOXING

Deliveries by full truck and carload only—or call for your own stock.
 (Prices subject to change without notice.)

PENNSYLVANIA SEEDLINGS and TRANSPLANTS

grown at High Altitude, in the heart of the
ORIGINAL PENNSYLVANIA PINE FORESTS

	Per 100	Per 1000
American Red Pine, 2-0, 2 to 4 ins.	\$4.00	\$30.00
American Red Pine, extra-good, 3-0, 4 to 8 ins.	5.00	40.00
Scotch Pine, 2-0, 2 to 4 ins.	2.00	15.00
Scotch Pine, very good, 2-yr., 4 to 6 ins.	3.00	25.00
Scotch Pine, extra-good, 3-yr., 6 to 8 ins.	3.50	30.00
Scotch Pine, extra-good, 3-yr., 8 to 12 ins.	4.00	35.00
Larch, 2-yr., 5 to 8 ins.	2.50	20.00
Pitch Pine (Adirondack), 2-yr., 5 to 8 ins.	2.00	15.00
Mugho Pine, 2-yr., spreading.	2.50	20.00
Mugho Pine, 3-yr., spreading.	3.50	30.00

All stock offered subject to prior sale. Five per cent discount on orders of 25,000 or more seedlings, one or more species.

EXCELLENT ROOT SYSTEMS STURDY PLANTS

500 at 1000 rate. No charge for packing or boxing when cash accompanies order; otherwise, one-half cash with order, balance C.O.D.

SCHROTH'S NURSERY

Nursery: Pine Flats, Pa.

INDIANA, PA.

NORTHERN-GROWN LINING-OUT STOCK

	Per 100	Per 1000
Betula papyrifera	\$8.00	\$50.00
1 to 2 ft.	8.00	70.00
2 to 3 ft.	8.00	70.00
3 to 4 ft.	25.00	...
4 to 6 ft.	40.00	...
Clethra alnifolia	6.00	50.00
6 to 18 ins.	6.00	50.00
18 to 24 ins.	8.00	70.00
Ilex verticillata	6.00	50.00
1 to 2 ft.	6.00	50.00
Syringa vulgaris	6.00	50.00
1 to 2 ft.	6.00	50.00
Viburnum cassinoides	6.00	50.00
1 to 2 ft.	6.00	50.00
Viburnum dentatum	5.00	40.00
6 to 12 ins.	6.00	50.00
1 to 2 ft.	6.00	50.00

EVERGREENS

	Per 100	Per 1000
Abies balsamea	4.00	25.00
4 to 8 ins.	4.00	25.00
8 to 12 ins.	8.00	60.00
Thuja occidentalis	4.00	25.00
6 to 9 ins.	4.00	25.00
6 to 12 ins.	5.00	40.00
Tsuga canadensis	4 to 8 ins.	25.00
8 to 12 ins.	5.00	40.00

The above stock is first-quality collected lining-out stock. Send for complete list of **Hardy Native Ferns, Lillies, Orchids, Wild Flowers, Trees, Shrubs and Evergreens.**

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NEW DARK VELVET RED

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and other fragrant

SUB-ZERO HYBRID TEAS

Large and beautiful as any.
Easy to grow and long to live.
Save replacement expense.
Also Yellow and Orange Climbers.

Write for trade prices to

BROWNELL ROSES
LITTLE COMPTON, R. I.

executive secretary of the American Association of Nurserymen. Within the past year a new department has been added to the Ohio state government, the department of natural resources, and its director, A. W. Marion, former director of agriculture, will discuss the activities of his department as they relate to the nursery industry.

Friday morning's session will open with a round-table discussion on "Time and Laborsaving Equipment for the Nurseryman," led by Louis S. Bookwalter, Berry Hill Nursery Co., Springfield. Short talks will be given by various members on the equipment they are using at their nurseries to reduce costs of operations. Emphasis will be given to tools and equipment for the small or moderate-size nursery rather than for the large nursery. The featured speaker of the morning will be Dr. Joseph E. Howland, garden editor of *House Beautiful* magazine, New York, who will speak on "Climate Control—A New Way to Sell Nursery Products and Services."

At noon members of chapter 1 of the American Association of Nurserymen will hold a luncheon meeting. And in the afternoon Howard P. Quadland, public relations counsel for the A. A. N., New York, will speak on "Market Development and Public Relations."

The highlight of the convention will be the annual "Olde Tyme Dinner" Thursday evening in the Grand ballroom. A floor show has been arranged with talent from Chicago, Cleveland and New York. The traditional menu will be served in the usual style.

VIRGINIA PROGRAM.

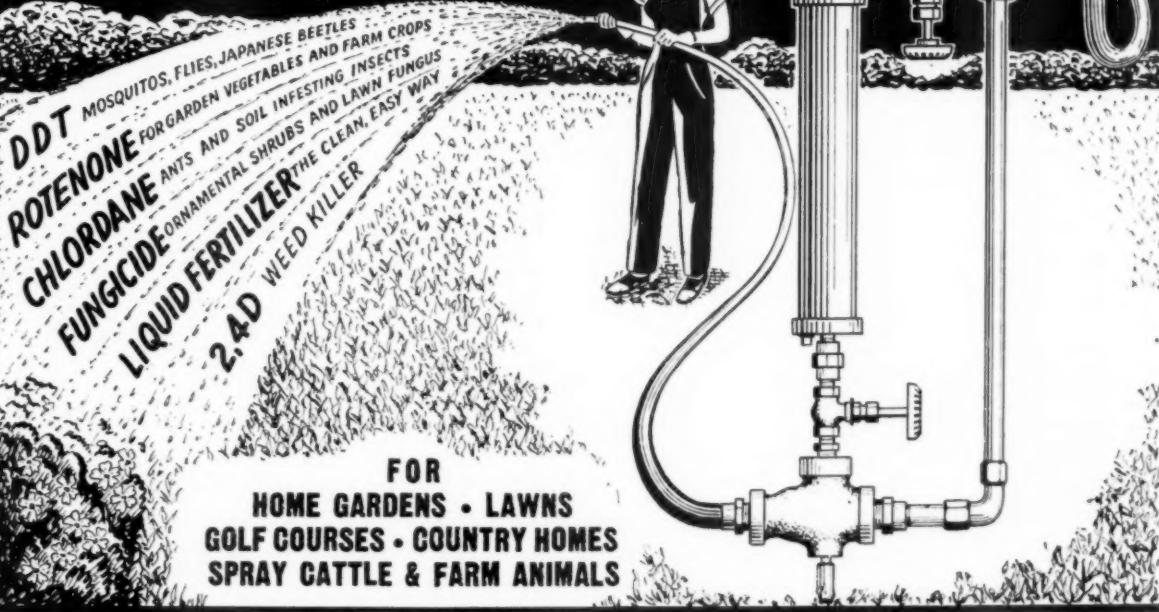
The national economic situation will be the theme of the winter meeting of the Virginia Nurserymen's Association, January 29 to 31 at the Hotel John Marshall, Richmond. Members will register Sunday afternoon and in the evening will be guests of Richmond nurserymen for a buffet supper.

Following a Dutch treat breakfast at 8:30 Monday morning, the meeting will be called to order by President Moultrie Lanier. The address of welcome will be given by Mayor W. Sterling King. President Lanier will give a preview of the program, and committees will make reports. Feature of the morning session will be a talk by Richard P. White, executive secretary of the American Association of Nurserymen.

After the call to order for the

HOZZER CIDE SPRAYS

1 QT. CONCENTRATED HOZZER CIDE IN CYLINDER
GIVES YOU 65 GALLONS
OF MIXED SPRAY



BUGHOZZER

OPERATES ON REGULAR HOUSE WATER PRESSURE

An applicator for insecticides, fungicides, weed killers and liquid fertilizers. Operates from water pressure from ordinary hose connection.

Offers easiest way in the world to apply crabgrass killer.

Operating time is from 14 to 36 minutes, depending upon the amount of pressure used.

One quart of concentrate "HOZZER CIDE" sufficient to spray up to a half acre.

Complete instructions given on labels of spray material holders.

Apparatus weighs only eleven pounds, and may be installed in approximately two minutes. Simply drive stake into ground near water outlet, place the BUGHOZZER on stake, connect its hose to spigot and fasten garden hose to bottom. When cylinder is filled with toxicant, the concentrate is mixed properly with flowing water.

Many, many BUGHOZZER and HOZZER CIDE users and dealers are nurserymen.

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SHADE and NUT TREES

	Per 10	Per 100
Black Walnut, 3 to 4 ft., T.	\$ 7.50	\$ 65.00
Black Walnut, 4 to 6 ft., T.	9.00	80.00
Black Walnut, 6 to 8 ft., T.	12.50	115.00
Black Walnut, 8 to 10 ft., T.	16.50	150.00
Filbert, American, 2 to 3 ft.	6.50	60.00
Filbert, American, 3 to 4 ft.	9.00	85.00
Filbert, European, Barcelona, 4 to 5 ft.	16.00	150.00
Pecan, Papershell, 3 to 4 ft.	12.50	100.00
Pecan, Papershell, 4 to 6 ft.	15.00	125.00
Elm, American, 8 to 10 ft.	2.25	\$21.50
Elm, American, 10 to 12 ft.	2.65	25.00
Gum, Sour and Sweet, 4 to 6 ft.	1.75	16.00
Gum, Sour and Sweet, 6 to 8 ft.	2.50	23.50
Linden, American, 8 to 10 ft.	3.00	27.50
Linden, American, 10 to 12 ft.	3.75	35.00
Maple, Silver, 10 to 12 ft.	2.25	21.50
Maple, Silver, 1½ to 2-in. caliper	3.00	27.50
Maple, Silver, 2 to 2½-in. caliper	4.50	42.50
Poplar, Lombardy, 8 to 10 ft.		7.50
Poplar, Lombardy, 10 to 12 ft.		12.00
	Each	Per 100

CONIFEROUS AND BROAD-LEAVED EVERGREENS

	Each	Per 10
Taxus cuspidata capitate and hicksi,		
18 to 24 ins.	\$3.50	\$32.50
24 to 30 ins.	4.25	40.00
30 to 36 ins.	5.50	50.00
Taxus cuspidata, 15 to 18 ins.	2.75	25.00
Taxus cuspidata, 18 to 24 ins.	3.50	32.50
Taxus cuspidata, 24 to 30 ins.	4.25	40.00
Buxus japonica, 24 to 30 ins.	4.25	40.00
Buxus japonica, 30 to 36 ins.	5.75	55.00
Buxus sempervirens, 18 to 24 ins.	3.75	35.00
Buxus sempervirens, 24 to 30 ins.	5.00	47.50
Rhododendron catawbiense, 18 to 24 ins.	2.50	22.50
Rhododendron catawbiense, 2 to 3 ft.	3.00	27.50
Rhododendron maximum, 2 to 3 ft.	2.50	22.50
Rhododendron maximum, 3 to 4 ft.	3.50	32.50
Kalmia latifolia, 18 to 24 ins.	2.00	17.50
Kalmia latifolia, 2 to 3 ft.	2.50	22.50
Ilex crenata rotundifolia, 15 to 18 ins.	1.75	15.00
Ilex crenata rotundifolia, 18 to 24 ins.	2.50	22.50
Pyracantha rogersii, evergreen, red berries,		
2 to 3 ft.	2.25	20.00
3 to 4 ft.	3.00	27.50
4 to 6 ft.	4.50	40.00
Viburnum rhytidophyllum, 5 to 6 ft.	6.50	60.00

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On own roots.

Large plants, 5 ft. and up.
Charles X, William Robinson,
Pres. Grey, Leon Gambetta, etc.

To plant now.

AMERICAN ARBORVITAE, 10 ft.
An assortment of heavy stock
for landscaping.

SAMUEL FRASER NURSERY, Geneseo, N.Y.

PACHYSANDRA

The ideal permanent ground cover plant for shady areas in all climates. Strong, well rooted 1-yr.-old plants, \$3.75 per 100; \$35.00 per 1000; 5000 or more at \$32.50. Available March through November.

PEEKSKILL NURSERY SHRUB OAK, N.Y.

CHINESE CHESTNUT TREES

Blight-resistant.

TREES—TRANSPLANTS—LINERS

THE GOLD CHESTNUT NURSERY

Cowen, W. Va.

PIERIS JAPONICA

The most beautiful broad-leaved evergreen of all. In summer the color of the foliage is always changing, first red, then pale green and then dark green. In August the flower buds form, in graceful racemes for next spring's flowers. White Lily of the Valley flowers appear with the first warm weather, and flowers often last 6 weeks. Grows well in sun or shade. Makes a nice contrast with Azaleas and Rhododendrons.

Each
2 to 4 ins. T.
4 to 7 ins. T.
\$0.10

Send for list of other choice plants.

ALANWOLD NURSERY NESHAMINY, BUCKS CO., PA.

BURR

Leading wholesale source for

Nursery Stock

Send us your Want List.

C. R. BURR & CO., INC. Manchester, Conn.

PRIVET and BERBERIS

Splendid Stock

Write for Special Quotations

LESTER C. LOVETT
MILFORD DELAWARE

second session at 1:30 p. m., exhibitors will be introduced. The first of the guest speakers carrying out the convention theme will be Philip M. McKenna, Latrobe, Pa., whose subject will be "Resistance to the Socialistic Trend." A round-table discussion will conclude the program.

The annual banquet will be held at 6 p. m., and Senator Harry Flood Byrd, Winchester, Va., will speak on "Where We Are—What Are We Going to Do about It?" Music and dancing will follow.

The concluding session will be called to order at 10 o'clock Tuesday morning when the report of the promotion and education committees will be given by A. J. Shoosmith and A. G. Smith, Jr. G. Edmond Massie, Richmond, Va., state senator and president of Garrett & Massie, will give a talk entitled "False Prophet." A round-table discussion of general nursery problems will follow.

At a group luncheon scheduled for noon, Dr. Edward D. Grant, Richmond, Va., executive secretary of the Presbyterian board of education, will discuss the question "Does America Want Socialism?"

MICHIGAN PLANS.

A streamlined program designed for education and enjoyment has been planned for the twenty-eighth annual convention of the Michigan Association of Nurserymen, February 1 to 2 at the Hotel Fort Shelby, Detroit.

Registration will begin at noon Wednesday, and there will be a reception and entertainment that evening in the hotel's new Sky room.

The business meeting will be opened at 10 a. m. Thursday with President A. W. (Dick) Krieger's address of welcome and report of progress, to be followed by the report of the secretary-treasurer, Bernard Ward. First of the guest speakers will be E. M. Miller, of the Human Engineering Institute, Kalamazoo, who will talk on business philosophy and salesmanship.

A member of the Michigan association, James I. E. Ilgenfritz will be present as a guest in his capacity of president of the American Association of Nurserymen to discuss national association matters. If possible, R. P. White, A. A. N. executive secretary, will be present to give the latest development in national legislation and other news from the nation's capital which will be of interest to nurserymen. A representative of the United States Department of Labor wages and hour division will tell how the wages and hour law affects the nursery industry.

From Michigan State College, Dr.

FOREST NURSERY CO., Inc.

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Night Phone 17W

We offer the following understock plants, suitable for grafting or budding. All of these items are available for prompt shipment. We suggest that you get your order in early, as the supply of some items is limited.

UNDERSTOCKS For Grafting or Budding

ACER DASYCARPUM , Silver Maple.	Per 100	Per 1000	FAGUS AMERICANA , American Beech.	Per 100	Per 1000
Special, $\frac{1}{4}$ -inch up.....	\$ 2.00	\$15.00	Special, $\frac{1}{4}$ -inch up.....	\$ 3.00	\$25.00
No. 1, 3/16-inch up.....	1.75	12.50	No. 1, 3/16-inch up.....	2.50	20.00
No. 2, 2/16 to 3/16-inch.....	1.25	10.00	No. 2, 2/16 to 3/16-inch.....	2.00	15.00
ACER RUBRUM , Red Maple.			FRAXINUS AMERICANA , White Ash.		
ACER SACCHARUM , Sugar Maple.			FRAXINUS LANCEOLATA , Green Ash.		
Special, $\frac{1}{4}$ -inch up.....	2.50	20.00	5/16 to 7/16-inch, S.....	3.00	25.00
No. 1, 3/16-inch up.....	2.00	15.00	$\frac{1}{4}$ -inch up, S.....	2.50	20.00
No. 2, 2/16 to 3/16-inch.....	1.75	12.50	3/16 to $\frac{1}{4}$ -inch, S.....	2.00	15.00
AESCHLUS OCTANDRA , Yellow Buckeye.			HAMAMELIS VIRGINIANA , Witch Hazel.		
Special, $\frac{1}{4}$ -inch up.....	2.50	20.00	Special, $\frac{1}{4}$ -inch up.....	6.50	60.00
No. 1, 3/16-inch up.....	2.00	15.00	No. 1, 3/16-inch up.....	5.50	50.00
No. 2, 2/16 to 3/16-inch.....	1.50	10.00	No. 2, 2/16 to 3/16-inch.....	4.50	40.00
ARISTOLOCHIA TOMENTOSA , Dutchman's-pipe Vine. Seedlings.			ILEX OPACA , American Holly.		
3/16 to $\frac{1}{4}$ -inch.....	3.00	25.00	Special, $\frac{1}{4}$ -inch up.....	6.50	60.00
2/16 to 3/16-inch.....	2.00	15.00	No. 1, 3/16-inch up.....	5.50	50.00
BETULA NIGRA , River Birch.			No. 2, 2/16 to 3/16-inch.....	4.50	40.00
Special, $\frac{1}{4}$ -inch up.....	2.50	20.00	JUGLANS NIGRA , Black Walnut.		
No. 1, 3/16-inch up.....	2.00	15.00	Special, 7/16-inch up.....	6.00	50.00
No. 2, 2/16 to 3/16-inch.....	1.75	12.50	No. 1, 5/16 to 7/16-inch.....	5.00	40.00
CARPINUS CAROLINIANA , Hornbeam.			No. 2, $\frac{1}{4}$ -inch up.....	4.00	30.00
Special, $\frac{1}{4}$ -inch up.....	4.00	35.00	JUNIPERUS VIRGINIANA , Red Cedar.		
No. 1, 3/16-inch up.....	3.50	30.00	Special, $\frac{1}{4}$ -inch up, Tr., field-grown.....	10.00	90.00
No. 2, 2/16 to 3/16-inch.....	3.00	25.00	No. 1, 3/16-inch up.....	8.00	70.00
CORNUS FLORIDA , White-flowering Dogwood.			No. 2, 2/16 to 3/16-inch.....	7.00	60.00
Special, $\frac{1}{4}$ -inch up.....	5.00	45.00	LIGUSTRUM AMURENSE , Amur River North Privet.		
No. 1, 3/16-inch up.....	4.00	35.00	LIGUSTRUM OBUTSIFOLIUM , Iboya Privet.		
No. 2, 2/16 to 3/16-inch.....	3.50	30.00	LIGUSTRUM OVALIFOLIUM , California Privet.		
No. 3, under 2/16-inch.....	3.00	25.00	LIGUSTRUM SINENSE , Amur River South Privet.		
$\frac{1}{4}$ -inch up, S.....	5.00	45.00	$\frac{1}{4}$ -inch up.....	3.00	25.00
3/16 to $\frac{1}{4}$ -inch, S.....	4.00	35.00	3/16 to $\frac{1}{4}$ -inch.....	2.50	20.00
2/16 to 3/16-inch, S.....	3.50	30.00	No. 2, 2/16 to 3/16-inch.....	2.00	15.00
CORNUS STOLONIFERA , Red Osier Dogwood.			MORUS ALBA TATARICA , Russian Mulberry.		
Special, $\frac{1}{4}$ -inch up.....	3.00	25.00	Special, $\frac{1}{4}$ -inch up.....	3.00	25.00
No. 1, 3/16-inch up.....	2.50	20.00	No. 1, 3/16-inch up.....	2.50	20.00
No. 2, 2/16 to 3/16-inch.....	2.00	15.00	No. 2, 2/16 to 3/16-inch.....	2.00	15.00
DIOSPYROS VIRGINIANA , American Persimmon.			PLUM , Native American.		
Special, $\frac{1}{4}$ -inch up.....	2.50	20.00	$\frac{1}{4}$ -inch up.....	4.50	40.00
No. 1, 3/16-inch up.....	2.00	15.00	3/16 to $\frac{1}{4}$ -inch.....	3.50	30.00
No. 2, 2/16 to 3/16-inch.....	1.75	12.50	2/16 to 3/16-inch.....	2.00	15.00
No. 3, under 2/16-inch.....	1.25	10.00	ULMUS AMERICANA , White Elm. Northern Strain.		
5/16 to 7/16-inch, S.....	4.00	35.00	ULMUS PUMILA , Chinese Elm.		
$\frac{1}{4}$ to 5/16-inch, S.....	3.50	30.00	Special, $\frac{1}{4}$ -inch up.....	2.50	20.00
3/16 to $\frac{1}{4}$ -inch, S.....	3.00	25.00	No. 1, 3/16-inch up.....	2.00	15.00
			No. 2, 2/16 to 3/16-inch.....	1.50	10.00
			WISTARIA FRUTESCENS , American Wistaria. Seedlings.		
			WISTARIA SINENSE , Chinese Blue Wistaria.		
			$\frac{1}{4}$ -inch up.....	10.00	90.00
			3/16 to $\frac{1}{4}$ -inch.....	9.00	80.00
			2/16 to 3/16-inch.....	8.00	70.00

See our advertisement on pages 18 to 24 in the January 1 issue on **Deciduous Flowering Shrubs; Forest and Nut Trees; Vines and Creepers; Coniferous and Broad-leaved Evergreens; Cherries; Rhubarb and Asparagus, and Hardwood Cuttings.**

LINING-OUT and FINISHED STOCK

Offered below are potted rooted cuttings and field bed transplants, x indicating times transplanted. 25 of one item at the 100 rate, 250 at the 1000 rate. No charge for packing when cash accompanies order. Otherwise, 25 per cent with order, balance net 30 days where credit is established. Others, C.O.D. Packing at actual cost. All prices F.O.B. New Augusta, Ind.

LINERS

	Each	Each	Each	Each	Each
	per 100	per 1000		per 100	per 1000
849 <i>Juniperus Horizontalis Plumosa</i> , 1-yr. pots	\$0.17	\$0.15	5265 <i>Taxus Media, Globe</i> , 1-yr. pots	\$0.20	\$0.18
1391 <i>Juniperus Communis, Vase</i> , 1-yr. pots	.17	.15	7655 2-yr. pots	.23	.21
3742 <i>Taxus Cupidata</i> , 1-yr. pots	.20	.18	2741 6 to 8 ins. x	.25	.22
6022 2-yr. pots	.25	.23	1384 6 to 8 ins. x	.25	.23
3799 6 to 8 ins. x	.27	.24	2417 6 to 10 ins. xx	.28	.25
3960 <i>Taxus Cup. Intermedia</i> , 2-yr. pots	.25	.23	9503 <i>Taxus Media Hicksii</i> , 1-yr. pots	.19	.17
1017 <i>Taxus Cup.</i> , <i>Kallay's Imp.</i> , 6 to 8 ins. x	.27	.24	1114 2-yr. pots	.23	.21
1689 <i>Taxus Cup. Nana</i> , 1-yr. pots	.20	.18	4085 10 to 12 ins. xx	.34	.31
4266 2-yr. pots	.23	.21	1865 <i>Taxus Media Thayerae</i> , 1-yr. pots	.20	.18
897 6 to 8 ins. x	.25	.24	1195 <i>Taxus Media Wellesleyana</i> , 2-yr. pots	.24	.22
1772 <i>Taxus Cup. Pyramidalis Hilli</i> , 1-yr. pots	.20	.18	410 <i>Thuja Occidentalis Elegansissima</i> , 1-yr. pots	.16	.14
1396 2-yr. pots	.24	.22	930 <i>Thuja Occidentalis Globosa</i> , 1-yr. pots	.16	.14
1884 6 to 8 ins. x	.26	.24	1897 <i>Buxus, Carr's Hardy</i> , 1-yr. pots	.20	.18
3226 <i>Taxus Cup. Tardiva</i> , 2-yr. pots	.24	.22	883 2-yr. pots	.24	.22

FINISHED SIZES

Fine, finished, landscape grades, all B&B, 5 or more at the 10 rate; 25 or more at the 100 rate.		Each		Each	
	per 10 per 100		per 10 per 100		per 10 per 100
600 <i>Juniperus Chin. Pfitzeriana</i> , 3 to 4 ft.	\$ 6.00	\$ 5.50	250 <i>Juniperus Virg. Kosteri</i> , 3 to 4 ft.	\$ 6.00	\$ 5.50
600 4 to 5 ft.	7.00	6.50	500 <i>Taxus Cupidata</i> , 18 to 24 ins.	4.50	4.00
400 <i>Juniperus Horizontalis Plumosa</i> , 2 to 2 1/2 ft.	2.50	2.25	500 2 to 2 1/2 ft.	5.75	5.25
300 2 1/2 to 3 ft.	3.00	2.75	500 <i>Taxus Media Hicksii</i> , 18 to 24 ins.	4.50	4.00
300 <i>Juniperus Horizontalis Douglasti</i> , 2 to 2 1/2 ft.	2.50	2.25	500 2 to 2 1/2 ft.	5.75	5.25
100 <i>Juniperus Virg. Pyramidifolia</i> , 7 to 8 ft.	10.00	9.00	100 <i>Thuja Occidentalis</i> , 4 to 5 ft.	4.00	3.75
			200 <i>Thuja Occidentalis Pyramidalis</i> , 4 to 5 ft.	4.50	4.00
			200 <i>Thuja Occidentalis Wareana</i> , 2 1/2 to 3 ft.	3.25	3.00

WRITE FOR COMPLETE LINER AND SURPLUS LIST

WANT LIST

The following items are needed, both in liners and finished stock. Please quote us what you can supply, per 100 and per 1000.

Euonymus Alatus Compactus, liners, 12 to 15 ins., 15 to 18 ins., 18 to 24 ins., 2 to 3 ft. and 3 to 4 ft.
Mahonia Aquifolium, liners, 12 to 15 ins., 15 to 18 ins. and 18 to 24 ins.
Viburnum Rhytidophyllum, liners, 12 to 15 ins., 15 to 18 ins. and 18 to 24 ins.
Viburnum Tomentosum, 18 to 24 ins., 2 to 3 ft. and 3 to 4 ft.



EAGLE CREEK NURSERY CO.

NEW AUGUSTA, INDIANA

On U. S. Highway 52 - 12 Miles N. W. of Indianapolis

CHINESE CHESTNUT BLIGHT-RESISTANT

Hemming strain of trees raised only from our heavy-bearing parent trees.

	Per 10	Per 100	Per 1000
18 to 24 ins.	\$ 3.50	\$32.50	\$300.00
2 to 3 ft.	6.00	55.00	500.00
3 to 4 ft.	8.00	70.00	650.00

F.O.B. Nurseries, packing extra.

EASTERN SHORE NURSERIES, Inc.
EASTON, MARYLAND

THE RHODE ISLAND NURSERIES NEWPORT, R. I.

Acer palmatum atropurpureum, 3-yr. transplants, 6 to 12 ins.

Viburnum opulus, 2-yr. transplants, 6 to 12 ins.

Myrica cerifera, 2-yr. transplants, 3 to 6 ins.

Write for samples and prices.

C. M. Hardin, dean of the agricultural experiment stations, will tell about some of the college's new projects, and Dr. Harold B. Tukey, head of the department of horticulture, will be toastmaster at the banquet Thursday evening.

Business sessions will close Friday shortly after noon, and Michigan nurserymen and out-of-state guests are urged to attend by Charles Greening, vice-president and general convention chairman.

Mrs. Walter M. Coon, as chairman of the ladies' entertainment committee, has planned a luncheon with entertainment and announces that the hotel is making a parlor available to the ladies for visiting and playing cards any time they wish during the convention.

TENNESSEE PROGRAM.

The forty-fifth annual convention of the Tennessee State Nurserymen's Association and the third annual nurserymen's short course sponsored by the department of horticulture of the University of Tennessee will be held February 1 to 3 at Knoxville, with headquarters at the Andrew Johnson hotel. Activities will start with an evening jamboree at 8 o'clock February 1.

The sessions February 2 will be held at the University of Tennessee agricultural college and will be called to order at 9:30 a. m. by President Joe N. Howell, Knoxville. After the invocation by Rev. Paul Martin, pastor of the Magnolia Avenue Methodist church, Mayor James Elmore will give a message of welcome, and Richard H. Jones, Nashville, will respond on behalf of the nurserymen. Robert Boyd, McMinnville, will present a new gavel to President Howell before he makes his presidential address entitled "Don't Overlook a Good Bet." Following the report of Secretary-treasurer John F. Varnell, Cleveland, committees will be appointed, and Kent McClain, Knoxville, will make announcements.

The short course program will begin with a talk on "Fruit Variety Nomenclature" by John T. Bregger, Clemson, S. C., president of the American Pomological Society, and will be followed by four more talks during the morning session. They will be "Adapted Varieties of Brambles and Strawberries for Tennessee," by Troy James, associate professor of horticulture, University of Tennessee; "Nut Varieties for the South," by Spencer B. Chase, forests products section, Tennessee Valley Authority, Norris; "Progress

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Place your order now for shipment when wanted. All stock listed here can be shipped promptly upon receipt of order. Liberally graded, true-to-name, best quality stock—offered at attractive prices.

CANNAS

Carefully grown under our personal supervision, they are true-to-name, liberally graded, 2 to 5-eye, strong divisions and will please the most exacting type of customer. Our Cannas are available for delivery when wanted during the Winter and Spring months.

Per	Per
100	1000

Allemania, Ambassador, Charles Henderson, City of Portland, Egandale, Firebird, Florence Vaughan, Golden Gate, Hungaria, Kate Grey, King Mides, Madam Crozy, Richard Wallace, Shenandoah, Venus Pink, Wintzer's Colossal, Wyoming.....	\$6.00	\$50.00
King Humbert, President, Copper Giant, Louis Cayeux, Yellow King Humbert.....	7.00	60.00

PEACH TREES

1-year Buds	Per	Per	Per
Each	10	100	1000

1-in. and up, heavily br.....	\$1.05	\$9.00	\$80.00	\$750.00
7/8 to 1-in., 6 to 7 ft.....	.90	7.50	65.00	600.00
11/16 to 7/8-in., 5 to 6 ft.....	.75	6.00	50.00	450.00
9/16 to 11/16-in., 4 to 5 ft.....	.65	5.00	40.00	350.00
7/16 to 9/16-in., 3 to 4 ft.....	.55	4.00	30.00	250.00
5/16 to 7/16-in., 2 to 3 ft.....	.45	3.00	20.00	150.00
1/4 to 5/16-in., 2 to 3 ft.....	.40	2.50	15.00	125.00

Belle of Georgia, Brackett, Carman, Crawford's Early, Crawford's Late, Early Rose, Elberta, Gage Elberta, Goldeneast, Golden Jubilee, Greensboro, Halehaven, Heath Cling, Hiley, J. H. Hale, Krummel's Late, O'Boy, Redhaven, Rochester, Skipper's Late Red, Summercrest, Triogem, Valiant, Vedette, White Hale.

APPLE TREES

2-year Buds	Per	Per	Per
Each	10	100	1000

1-in. and up, heavily br.....	\$1.05	\$9.00	\$80.00	\$750.00
7/8 to 1-in., 6 to 7 ft.....	.90	7.50	65.00	600.00
11/16 to 7/8-in., 5 to 6 ft.....	.70	5.50	45.00	400.00
9/16 to 11/16-in., 4 to 5 ft.....	.65	5.00	40.00	350.00
7/16 to 9/16-in., 3 to 4 ft.....	.50	3.80	28.00	250.00
5/16 to 7/16-in., 2 to 3 ft.....	.45	3.20	22.00	200.00

Baldwin, Double Red Delicious, Red Gravenstein, Grimes Golden, Hyslop Crab, Double Red Jonathan, Lodi, McIntosh, Double Red McIntosh, Red Spy, Red Rome, R. I. Greening, Solid Red Delicious, Double Red Stayman, Williams Early Red, Yellow Delicious, Yellow Transparent, York Imperial.

PEAR TREES

2-year Buds	Per	Per	Per
Each	10	100	1000

11/16-in. and up, 5 to 6 ft.....	\$1.05	\$9.00	\$75.00
9/16 to 11/16-in., 4 to 5 ft.....	.90	7.50	60.00
7/16 to 9/16-in., 3 to 4 ft.....	.75	6.00	45.00

Bartlett, Clapp Favorite, Duchess, Kieffer, Seckel.

SOUR CHERRY

Each	Per 10	Per 100
------	--------	---------

11/16-in. cal. and up.....	\$1.20	\$10.50	\$90.00
9/16 to 11/16-in. cal.....	1.10	9.50	80.00
7/16 to 9/16-in. cal.....	.95	8.00	65.00
5/16 to 7/16-in. cal.....	.85	7.00	55.00

Montmorency, May Duke, Early Richmond, English Morello.

SWEET CHERRY

Each	Per 10	Per 100
------	--------	---------

11/16-in. cal. and up.....	\$1.40	\$12.50	\$115.00
9/16 to 11/16-in., 4 to 5 ft.....	1.15	10.00	90.00
7/16 to 9/16-in., 3 to 4 ft.....	1.00	8.50	75.00
5/16 to 7/16-in., 2 to 3 ft.....	.90	7.50	65.00

Black Tartarian, Governor Wood, Lambert, Napoleon, Schmidt's Bigarreau, Yellow Spanish.

ASPARAGUS ROOTS

Our Asparagus Roots have made a very good growth this season. We are the largest growers of Asparagus in the country. Write for special prices on large numbers.

MARY WASHINGTON, PARADISE

2-yr., No. 1.....	Per 25	Per 100	Per 250	Per 1000
1-yr., No. 1.....	\$0.75	\$2.50	\$4.75	\$16.00

RHUBARB ROOTS

VICTORIA, MYATT'S LINNAEUS.

2-in. and up, forcing grade.....	Per 25	Per 100	Per 250	Per 1000
1 1/2 to 2-in. cal.....	2.00	6.50	15.00	\$55.00
1 to 1 1/2-in. cal.....	1.50	4.50	10.00	35.00
5/8 to 1-in. cal.....	1.25	3.50	7.50	25.00
1/2 to 5/8-in. cal.....	1.00	2.50	5.00	16.00

BERRY PLANTS

No. 1 grade

Thorny Boysenberry.....	Per 10	Per 25	Per 100	Per 1000
Thornless Boysenberry.....	\$1.00	\$2.00	\$6.00	\$40.00
Lucretia Dewberry.....	1.00	2.00	7.00	50.00
Cumberland Raspberry.....	.60	1.25	4.00	30.00
Indian Summer Raspberry.....	1.00	2.00	6.00	45.00
Latham Raspberry.....	1.00	2.00	6.00	50.00
St. Regis Raspberry.....	1.00	2.00	6.00	50.00
Sunrise Raspberry.....	1.00	2.00	7.00	60.00
Blowers Blackberry.....	1.00	2.00	6.00	45.00
Eldorado Blackberry.....	1.00	2.00	6.00	45.00

GRAPEVINES

Our grapes have heavy, fibrous root systems, with many lengthy canes at the top. Write for prices on large numbers.

CONCORD (blue):	Per Each	Per 10	Per 100	Per 1000
2-yr., No. 1 grade.....	\$0.25	\$1.75	\$12.00	\$90.00
1-yr., No. 1 grade.....	.20	1.50	9.00	60.00

FREDONIA (black), NIAGARA (white):

2-yr., No. 1 grade.....	Per .25	Per 1.75	Per 12.00	Per 100.00
1-yr., No. 1 grade.....	.20	1.50	9.00	70.00

AGAWAM (red), BRIGHTON (red), CATAWBA (mahogany), MOORE'S DIAMOND (white), MOORE'S EARLY (black), WORDEN (black):

2-yr., No. 1 grade.....	Per .30	Per 2.00	Per 15.00	Per 120.00
1-yr., No. 1 grade.....	.25	1.75	12.00	90.00

CACO (red), DELAWARE (red), PORTLAND (white):

2-yr., No. 1 grade.....	Per .30	Per 2.25	Per 18.00	Per 150.00
1-yr., No. 1 grade.....	.25	2.00	15.00	120.00

PLUM TREES

Each	Per 10	Per 100	
11/16 to 7/8-in., 5 to 6 ft.....	\$1.00	\$8.50	\$75.00
9/16 to 11/16-in., 4 to 5 ft.....	.85	7.00	60.00
7/16 to 9/16-in., 3 to 4 ft.....	.70	5.50	45.00
5/16 to 7/16-in., 2 to 3 ft.....	.65	5.00	40.00

Abundance, Burbank, Fellenberg, Stanley, Shropshire Damson, Red June.

FREE PACKING FOR CASH WITH ORDER. Our regular Wholesale List offers a complete line of nursery stock. If you did not receive your copy, write us today. When requesting wholesale rates, kindly use your printed stationery. If interested in large lots, please submit a list of your anticipated requirements for special consideration.

PLUMFIELD NURSERIES

BOX 7 L. A. Moffet, Mgr. FREMONT, NEB.

TERMS AND CONDITIONS OF SALE

TERMS—One per cent discount for cash if paid on or before 10th of month following date of invoice, and is due NET 30 days thereafter. Interest charged on past due accounts.

These terms are offered to those with established credit; otherwise cash, security, or satisfactory references. **C.O.D. orders must be accompanied by one-fourth cash.**

PRICES in this list are based upon present market conditions and are subject to change without notice. These are Wholesale Prices and apply upon the following quantities:

SURPLUS LIST

	Per 10	Per 100	Per 1000
500 <i>Thuja Orientalis</i> , R.P., 12 to 18 ins.	\$ 1.00	\$ 8.50	\$ 75.00
5000 <i>Thuja Orientalis</i> , R.P., 9 to 12 ins.	.80	7.00	60.00
5000 <i>Thuja Orientalis</i> , R.P., 6 to 9 ins.	.70	6.00	50.00
100 <i>Juniper, Andorra</i> , TTT, 12 to 18 ins.	6.00	55.00	500.00
70 <i>Juniper, Tamarix</i> , TTT, 12 to 18 ins.	7.00	65.00	600.00
500 <i>Juniper, Hetz</i> , TTT, 12 to 18 ins.	6.00	55.00	500.00
200 <i>Juniper, Hetz</i> , TTT, 9 to 12 ins.	4.70	45.00	420.00
200 <i>Juniper, Savin</i> , TTT, 15 to 18 ins.	8.50	75.00	650.00
6000 <i>Juniper, Savin</i> , TTT, 12 to 15 ins.	5.50	50.00	450.00
3000 <i>Juniper, Savin</i> , TTT, 9 to 12 ins.	4.50	40.00	350.00
600 <i>Juniper, Scopulorum</i> (Silver Jun.), TTT, 2 to 3 ft.	10.00	90.00	800.00
2000 <i>Juniperus Virginiana</i> (Neb. type), 2 to 3 ft.	5.50	50.00	450.00
2500 <i>Juniperus Virginiana</i> (Neb. type), TTT, 18 to 24 ins.	4.50	40.00	350.00
3000 <i>Juniperus Virginiana</i> (Neb. type), TTT, 12 to 18 ins.	3.00	25.00	200.00
4000 <i>Juniperus Virginiana</i> (Neb. type), TTT, 9 to 12 ins.	2.50	20.00	150.00
1000 <i>Pine, Ponderosa</i> , R.P., 18 to 24 ins.	2.50	23.00	200.00
18,000 <i>Pine, Ponderosa</i> , R.P., 9 to 12 ins.	1.80	15.00	120.00
10,000 <i>Pine, Ponderosa</i> , R.P., 6 to 9 ins.	1.50	12.00	90.00
3000 <i>Pine, Banksiana</i> , R.P., 18 to 24 ins.	1.80	15.00	120.00
2500 <i>Pine, Banksiana</i> , R.P., 12 to 18 ins.	1.50	12.00	100.00
2000 <i>Pine, Banksiana</i> , R.P., 9 to 12 ins.	1.20	10.00	80.00
3000 <i>Pine, Sylvestris</i> , R.P., 12 to 18 ins.	2.20	20.00	180.00
9000 <i>Pine, Sylvestris</i> , R.P., 9 to 12 ins.	2.00	18.00	150.00
4000 <i>Pine, Sylvestris</i> , R.P., 6 to 9 ins.	1.50	12.00	100.00

FIELD-GROWN GRAFTS

	Per 10	Per 100
400 <i>Juniper, Pathfinder</i> , 18 to 24 ins., TTT, 2-yr., in field.	\$13.00	\$120.00
700 <i>Juniper, Pathfinder</i> , 12 to 18 ins., TTT, 1-yr., in field.	9.00	85.00

FOR 52 YEARS

Our business has been growing

Rhododendrons

Azaleas

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E. RUTHERFORD, N. J.

TAXUS BREVIFOLIA

Finished stock. Come and see it.
In lots of 25 to 100. For cash.

	Each
15 to 18 ins., B&B.	\$3.50
18 to 24 ins., B&B.	4.50

No shipping. Send your truck.

HUEBNER'S NURSERY

MONROE, N. Y.

Route 17 Orange County

LINING-OUT STOCK

Spring, 1950

Hardy Azalea Hinodegiri, Hinomayo, Nome, Snow, Azalea Kaempferi Hybrids: Carmen, Cleopatra, Fedora, Atlanta, Mme. Butterfly, etc.

1-yr., 3 to 5 ins., 18c ea.;
4 to 6 ins., 25c ea.;
2-yr., 4 to 6 ins., 35c ea.;
6 to 8 ins., 50c ea.

Cornus florida rubra, 1-yr. grafts, 18 to 24 ins., 25c ea.; *Acer palmatum*, 1-yr. grafts, 9 to 12 ins., 75c ea. *Lilacs*, 1-yr. grafts, many varieties, 20c ea. Ask for complete list of other varieties.

DEERFIELD NURSERIES
DEERFIELD STREET P.O., N. J.

LINERS

WELL ESTABLISHED

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GRESHAM'S NURSERY

R.F.D. 9 RICHMOND, VA.

Report on Experimental Work with Wooly Apple Aphis," by W. W. Staley, entomologist, state agricultural experiment station, Knoxville, and "Are You a Good Salesman?" by Dr. Axel Brett, professor of philosophy and psychology, University of Tennessee.

To open the afternoon session Dr. N. D. Peacock, vice-dean of the university's college of agriculture, will introduce the new head of the department of horticulture, Dr. B. S. Picket, who will report on "The Ornamental Horticulture Curriculum." A talk entitled "So You Planted a Job?—Now What?" will be made by Fred C. Galle, assistant professor of horticulture, and another on "Lawn Grass Problems," by J. K. Underwood, associate professor of agronomy. Following a panel discussion on "Leading Plant Material for My Section," Prof. G. M. Bentley, state entomologist emeritus, will introduce the new state entomologist. A tour of McCord Hall, the university's new dairy building, will wind up the afternoon session.

At 5:45 p. m. nurserymen will assemble in the lobby of the Andrew Johnson hotel for a trip to Gatlinburg, where Howell Nurseries will be host for a dinner. Rev. F. C. Atkins, pastor of Oakwood Baptist church, will be toastmaster, and a floor show will be presented by Joe Canaday and the Sourwood trio.

The association's business meeting will be held in the main assembly room of the Andrew Johnson hotel Friday morning at 9 o'clock. A representative of Bell & Howell Co., Chicago, will talk on "Sales with the Right Picture Setup," and Curtis Porterfield, administrative assistant for the American Association of Nurserymen, Washington, D. C., will report on "A. A. N. Activities." A presentation of a scholarship award by the Tennessee State Nurserymen's Association and the Tennessee Federation of Garden Clubs will be made by the vice-presidents of the two associations, H. R. Potter and Mrs. R. L. McReynolds. Dean Peacock will make the acceptance. The final talk on the program will be entitled "Try Something New," and the speaker will be announced later.

The consideration of the adoption of new bylaws and code of ethics will be discussed by Hoskins Shadow, Winchester.

OREGON PLANS.

A one-day meeting will be held by the Oregon Association of Nurserymen February 2 in the Georgian room of the Heathman hotel, Port-



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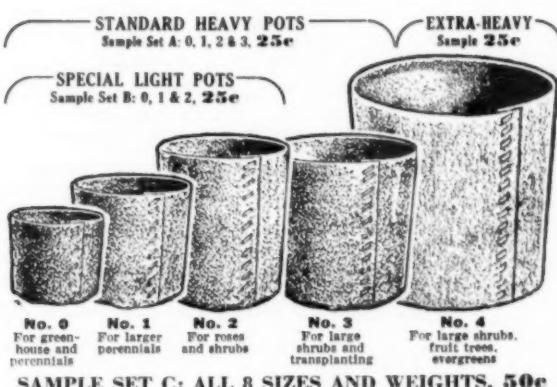
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	Per	Per	Per	Per
	100	1000	100	1000
Ash, Green.				
15,000	18 to 24 ins...	\$ 2.50	\$ 22.00	
70,000	12 to 18 ins...	1.80	15.00	
200,000	6 to 12 ins...	1.20	10.00	
Caragana.				
1000	2 to 3 ft...	6.00	55.00	
5000	18 to 24 ins...	4.50	40.00	
12,000	12 to 18 ins...	3.20	28.00	
20,000	6 to 12 ins...	2.10	18.00	
Cottonwood.				
7000	3 to 4 ft...	1.70	15.00	
30,000	2 to 3 ft...	1.40	12.00	
12,000	12 to 18 ins...	.80	7.00	
Cydonia Japonica				
3500	6 to 12 ins...	2.50	20.00	
Elm, Chinese.				
20,000	2 to 3 ft...	3.50	30.00	
160,000	18 to 24 ins...	2.40	20.00	
100,000	12 to 18 ins...	1.70	14.00	
2,000,000	6 to 12 ins...	.80	7.00	
Honeysuckle.				
100,000	6 to 12 ins...	2.50	20.00	
Honey Locust, Thornless.				
2000	2 to 3 ft...	3.50	30.00	
5000	18 to 24 ins...	2.60	22.00	
10,000	12 to 18 ins...	1.80	15.00	
80,000	6 to 12 ins...	1.40	12.00	
Locust, Black.				
8000	3 to 4 ft...	4.50	40.00	
20,000	2 to 3 ft...	2.90	25.00	
Mulberry, Russian.				
31,000	2 to 3 ft...	\$ 4.00	\$ 35.00	
20,000	18 to 24 ins...	2.90	25.00	
10,000	12 to 18 ins...	1.90	16.00	
59,000	6 to 12 ins...	1.20	10.00	
Pin Oak.				
11,000	2 to 3 ft...	12.00	100.00	
500	18 to 24 ins...	9.00	80.00	
1500	12 to 18 ins...	7.00	60.00	
450	8 to 12 ins...	5.00	40.00	
Poplar, Lombardy, 1-yr.				
1600	5 to 6 ft...	14.00	120.00	
1000	4 to 5 ft...	10.00	90.00	
500	3 to 4 ft...	8.50	75.00	
100	2 to 3 ft...	5.60	50.00	
Redbud.				
	Nebraska-grown, Nebraska seeds.			
2000	12 to 18 ins...	7.50	70.00	
10,000	6 to 12 ins...	5.00	40.00	
Sand Cherry.				
8000	2 to 3 ft...	10.00	90.00	
30,000	18 to 24 ins...	8.00	70.00	
30,000	12 to 18 ins...	5.50	50.00	
15,000	6 to 12 ins...	4.00	35.00	

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land. As is the custom at the association's midwinter meeting, the program will be devoted mainly to hearing committee reports and reports from the faculty of Oregon State College and to discussing association business.

Following the call to order at 9:15 a. m. by President E. (Mike) Dering, will be the reading of the minutes by Secretary R. A. Walker and the treasurer's report by Lynn Brooks. Committee reports will be heard as follows: Legislative by James Doty; quarantine by Avery Steinmetz; transportation by Wayne McGill, and membership by Sigward Edstrom. Wayne Melott, nursery representative on the Oregon Bulb, Florist and Nursery Council, which will meet the day before, will report on the council's activities. Avery Steinmetz will present a nursery stock survey.

A state college hour has been planned for 11 o'clock at which Dr. Roy Young, pathologist, will present research data on sclerotia of *Camellia japonica*; R. Ralph Clark, horticultural specialist, will discuss blueberries, and Al Roberts, associate horticulturist, will talk about dwarf rootstocks for fruit trees.

After luncheon members will discuss cooperative advertising and publicity. A business meeting of Oregon chapter 12 of the American Association of Nurserymen will be held at 3:30, with President Julia Hausch presiding.

COMBINED NEW ENGLAND-MASSACHUSETTS PROGRAM.

Meetings of the New England Nurserymen's Association, the Massachusetts Nurserymen's Association and chapter 5 of the American Association of Nurserymen will be held February 7 to 9 at the Hotel Kenmore, Boston. It will be the thirty-ninth annual convention for New England nurserymen and the forty-first annual convention for Massachusetts nurserymen.

Activities will begin Monday morning with a meeting of the Massachusetts Nurserymen's Association at 10 o'clock in the Crystal ballroom. Following roll call, President Luke May will give his address and Secretary C. J. Gilgut and Treasurer Charles Godin will report. Reports of some special committees will be heard, Mr. May reporting for the legislative committee and Mr. Godin for the membership committee.

Members of the Massachusetts and New England associations will gather together at luncheon to hear the keynote speaker, Dr. Richard P.

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	Per 10	Per 100		Per 10	Per 100	
<i>Acer palmatum atropurpureum</i>	\$7.00	\$65.00	<i>Juniperus virginiana elegantissima</i>	\$5.00	\$45.00	
<i>Acer palmatum dissectum atropurpureum</i>	7.00	65.00	<i>Juniperus virginiana glauca</i>	5.00	45.00	
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<i>Cornus florida rubra Prosser</i>	7.00	65.00	<i>Juniperus virginiana schotti</i>	5.00	45.00	
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<i>Ilex opaca femina</i>	5.00	45.00	<i>Juniperus sabina Von Ehron</i>	5.00	45.00	
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<i>Juniperus chinensis sargentii</i>	5.00	45.00	<i>Magnolia stellata, Water Lily</i>	6.50	60.00	
<i>Juniperus chinensis sargentii glauca</i>	5.00	45.00	<i>Magnolia rustica rubra</i>	7.00	65.00	
<i>Juniperus chinensis meyeri</i>	5.00	45.00	<i>Tsuga canadensis pendula</i>	5.50	50.00	
<i>Juniperus virginiana burki</i>	5.00	45.00	<i>Tsuga canadensis pendula, 1-yr. grafts</i>	7.00	65.00	
<i>Juniperus virginiana canaertii</i>	5.00	45.00	All the above shipped from 2 1/4-inch rose pots.			

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White, executive secretary of the American Association of Nurserymen, discuss "Where Are We Going?" The afternoon session will be a short one devoted to business.

Immediately upon adjournment of the Massachusetts meeting, the New England Nurserymen's Association will hold its meeting in the same room, hearing the address of President Arthur E. Webster and the reports of Secretary Louis C. Vanderbrook, Treasurer Peter J. Cascio and special committees. Reports of standing committees will also be heard, legislative by Floyd Oatman; transportation by Charles S. Burr; resolutions by Edward Kelly and public relations by Homer K. Dodge. Peter J. Cascio, executive committeeman for region I of the American Association of Nurserymen, will discuss "Activities of the A. A. N." to bring the session to a close.

The annual all-day educational program is planned for Tuesday starting at 10 a. m. It will be open to all member firms of the New England and Massachusetts associations and employees. Nonmembers will be admitted upon payment of a \$2 registration fee. The program will consist of talks by members of the New England Nurserymen's Association on practical nursery problems, with



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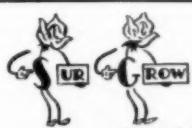
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White Double-flowering Dogwood. 2 to 3 ft., well branched, B.R.	125.00
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CALIFORNIA PRIVET. 1-yr. The best we have ever grown. Reasonably priced. Write for quotation on grades desired, or see our representative, C. J. Hayden, Hotel La Salle, during the meeting of the Illinois State Nurserymen's Association, January 17, 18 and 19.

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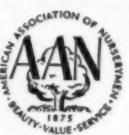
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open discussion following each talk. Willard Bond, Bay State Nurseries, Inc., Abington, Mass., will be chairman and moderator for the day. Charles S. Burr, president of C. R. Burr & Co., Manchester, Conn., will tell "How to Avoid Waste in the Nursery"; Charles Godin, Adams Nurseries, Inc., Westfield, Mass., will answer the question "Is the Job Finished When the Order Is Taken?", and after an intermission for luncheon Richard M. Wyman, Jr., Wyman's Framingham Nurseries, Framingham, Mass., will tell "What the Retail Landscape Nurseryman Expects When He Buys Nursery Stock"; Alfred Angel, Boulevard Nurseries, Newport, R. I., will take for his subject "A Wholesaler Answers Back," and a panel discussion on "What Responsibilities Does a Landscape Foreman Have in Carrying Out Jobs?" will be given by foremen from several nurseries, among them Raymond Hopkins, Peter Cascio Nursery, West Hartford, Conn., and Robert Kane, Wyman's Framingham Nurseries, Framingham, Mass.

At 10 o'clock Wednesday morning New England nurserymen will reconvene to hear further reports of standing committees, among them membership by E. D. Robinson; trade exhibits by Jack Shore; educational by Willard Bond, and public relations by Homer K. Dodge. Guest speaker for the morning program will be Luther L. Baumgartner, director of the biochemical laboratories of B. F. Goodrich Co., at Yonkers, N. Y., whose subject will be "Insure Survival of Your Transplants." James S. Wells, manager of Koster Nursery, Bridgeton, N. J., will discuss "Propagation Practices." Unfinished business and the introduction of new officers will be taken care of after luncheon.

VIRGINIA LANDSCAPE SHORT COURSE.

A landscape school for nurserymen and their employees will be held February 27 to March 10 at Virginia Polytechnic Institute, Blacksburg, sponsored by the horticultural department. Those planning to attend should write about reservations to A. C. Beecher, assistant horticulturist, Virginia agricultural extension service, Blacksburg. A registration fee of \$2.50 will be charged to cover the cost of materials used.

Subjects to be taught during the course will be landscape drafting, including lettering, landscape symbols, rendering plans and sketching; landscape design, its history, fundamen-

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tal principles of composition and their application and design of landscape features; planting design, its principles and their application to small homes, public buildings and rural homes; preparation of planting plans and review of plant materials, engineering and construction details. The teaching staff will be composed of Prof. S. H. Byrne, Prof. A. G. Smith, Jr.; R. A. Jester, and A. C. Beecher.

HAVING twenty acres of land and 2,000 square feet of greenhouses, Harry Lingus, is starting the Greenview Nursery at Michigan City, Ind. The mailing address is Route 3, Box 308.

TWO nursery owners who are serving this year as officials of Rotary International are Charles G. Tennent, Tennent Nurseries, Asheville, N. C., and Vernon Burkhardt, Burkhardt Nurseries, Barnesville, O. Mr. Tennent is chairman of the nominating committee and is a former vice-president, district governor and committeeman of the Rotary International and a past president of the Asheville Rotary Club. Mr. Burkhardt is a district governor of the Rotary International and a past president of his local Rotary Club.

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8 to 12 ins.	12½c	10c
12 to 15 ins.	15c	12½c
15 to 18 ins.	20c	17½c
300 or more plants at 1000 rate.		

DOUBLE-FLOWERING PEACHES

Red, White, Pink
Well rooted and well branched.

	Each per 100	Each per 1000
18 to 24 ins.	17½c	15c
2 to 3 ft.	20c	17½c
3 to 4 ft.	25c	22½c

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Once transplanted, stocky plants. Each 2 to 4 ins. 5c
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This Business of Ours

Reflections on the Progress and Problems of Nurserymen

By E. Sam Hemming

PLANTS THAT CHANGE THEIR CHARACTER.

There are a good many plants that change their character as they grow to maturity or are influenced by changing environment or different cultural conditions.

We had a curious experience with the common English ivy, *Hedera helix*. This vine has the habit of changing not only its foliage forms but also its manner of growth when it matures, produces flowers and seeds. The plant reaches maturity only after it is quite old and has been growing on an old wall or tree quite a long time and has grown as far as it can possibly reach. Then it will usually send out short spurs of shrubby growth on which no adventitious roots are borne and on which the flowers are borne. The foliage changes from the usual star-shaped leaf to a more or less pointed ovate leaf, the change being sufficiently pronounced so that customers will not recognize it. On one occasion we rooted a batch of cuttings of this type of growth, potting them up for sale. About a year after the plants were planted in the ground they reverted to the more usual youthful form, but we had some difficulty convincing our customers that they were the right plants.

There are several plants that are shrubs or vines depending upon where they are planted. *Euonymus kiautschovicus* is one of these. Growing in the nursery or in border and foundation plantings it forms the usual bush and without indications of adventitious roots, but planted up tight against a brick wall it will actively climb up a quite high wall. As a bush I have never seen it reach higher than about eight feet; as a vine I have seen it go to twenty feet.

The behavior of *Elaeagnus pungens* is similar but less pronounced, as it is not likely to put out adventitious roots but forms a sort of springy tension in the shoots that press against the wall. Similarly, a wistaria pruned into trunked tree form is quite content to grow a shrubby head until one of the branches or twigs touches the ground or some physical support whereupon it will send out its usual long twining runners.

A great many of our coniferous

evergreen trees have three separate life and growth stages wherein their character changes quite pronouncedly. They have a juvenile form when they are young, compact, dwarfish plants; a mature form when they grow into a tall, shapely and symmetrical tree and then in old age they form a high-trunked tree with the top often open, gnarled and picturesque. Much of our trouble with foundation plantings, particularly during the first two decades of this century, came from the widespread use of juvenile forms of many of the world's forest trees. The juvenile forms were mistakenly used in place of truly dwarf types.

A notable example of the changing character of a single species of plants due to climatic change is the common red cedar, *Juniperus virginiana*. This plant has a notable range of hardiness from the subarctic to the subtropical. In the far north it is a low sprawling plant, barely higher than the rocky terrain. As

it comes southward it grows into a tall narrow column of medium height. Here, in Maryland, and as you go farther south toward Florida it assumes a broader open character, some of the trees growing quite tall, perhaps fifty or sixty feet high and often with a spread of thirty feet or more.

My father has stated that much of Florida was at first landscaped backward. Instead of using the local wealth of plant life, northerners brought potted plants from home and greenhouses, usually of subtropical varieties. Instead of staying the subdued dwarfs of the unnatural conditions of the north, these soon grew up past the second-story windows when planted in a happier climate.

E. S. H.

THE HOLLY OSMANTHUS.

On Christmas day a large holly osmanthus by my father's porch was laden with tiny, waxy, fragrant, white

3300 *Philadelphus virginialis*,
1-yr. R.C., 18 to 24 ins., 3
branches or more. Fine mail-
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\$22.50 per 100;
\$175.00 per 1000.

3500 *Forsythia spectabilis*,
R.C., 12 to 18 ins.
\$5.00 per 100; \$40.00 per 1000.

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For years Vigoro has been America's best known plant food . . . America's fastest-selling plant food. Now millions of gardeners and homeowners will regard Vigoro even more highly.

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*VIGORO is the trade-mark for Swift & Company's complete, balanced plant food.

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Plant Food Division

U. S. Yards

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2 MORE GREAT GARDENING AIDS

End-o-Weed



destroys over 100 different kinds of weeds.

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provides all the pest protection most gardens need!



flowers. Of course, it has been a mild season here on the Eastern Shore of Maryland, but it is good to have a plant in bloom at Christmas time, and this early winter-flowering plant will often flower then.

I have always thought this handsome broad-leaved evergreen, *Osmanthus ilicifolius*, a much neglected shrub. It has been neglected for two reasons. First, because it looks like holly, people think of it as a substitute, and, unfortunately, it has black berries. The other reason for its neglect is that it propagates a little slowly and it is not rapid in growth.

If it were not for the American holly this plant would be much more widely planted, for it has many virtues in its own right. The foliage is a dark handsome green, the leaves are both entire and spiny on the same plant and, except that it is not crinkly, it resembles more the English holly than the American holly. It is slow-growing and makes an ideal compact shrub for foundation planting and takes to pruning. I know of a couple holly *osmanthus* that are at least 30 years old and are two 10-foot mounds.

The plant's greatest virtue, in addition to its attractiveness, is its hardiness, for, while it has the habit of growing and flowering in late fall, it is considerably hardier than the



20 MILLION TREES A YEAR

The above picture shows a section of Musser Nursery No. 2. Write for complete catalog on Evergreen seedlings and transplants, also Hardwood seedlings.

MUSSER FORESTS, Inc. INDIANA, PENNA.

LINING-OUT STOCK

If you have not received a copy of our Fall, 1949, price list and are interested, send for same.

THOMAS B. MEEHAN CO., Inc.
Dresher, Pa.

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Rhododendron — Kalmia
Azalea

CURTIS NURSERIES
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LINING-OUT STOCK OUR SPECIALTY

Ready for Field Planting BOYD'S 1950 PLANT GUIDE

Shade Tree Liners

We are pleased to give you what we think is a darn good list of items to include in your Spring, 1950, plantings. Our lining-out stock will compare first-class, without a doubt, with some of the best stock to be had anywhere. So—please place your orders now and don't be disappointed later on in the season. Stock quoted F.O.B. McMinnville, Tennessee. (5 per cent discount on all orders received in January, with cash enclosed.)

LINING-OUT STOCK Shade Tree Seedlings

250 takes a 1000 rate. Add 25 per cent extra for orders smaller than 250 of each variety.

	Per 1000	4 to 6 in.	6 in.	12 in.	18 in.
ALBIZZIA, Mimosa Tree	\$35.00	\$50.00	\$65.00		
ACER, Silver Maple	7.50	10.00	12.00		
ACER, RUBRUM.					
Sorbet Maple	12.00	15.00	20.00		
Sugar Maple	12.00	15.00	20.00		
BETULA, River Birch	12.00	15.00	20.00		
CERCIS, Redbud	10.00	15.00	20.00		
CORNUS, White-flowering					
Dogwood	20.00	30.00	40.00		
GLADRASSTIS, Yellow					
Virens	25.00	35.00	45.00		
DIOSPYROS, American					
Persimmon	10.00	15.00	25.00		
FAGUS, American Beech	7.50	10.00	15.00		
FRAXINUS, American					
White Ash	7.50	10.00	15.00		
PRINIANUS, American					
Graueri	7.50	10.00	15.00		
GINKGO BILOBA	90.00	115.00			
GLEIDITISIA, Common					
Honey Locust	10.00	12.00	15.00		
GYNNOCLADUS, Kentucky					
Coffee Tree	25.00	30.00	115.00		
HICORIA, Shellbark	40.00	50.00	75.00		
HICORIA, Shagbark	40.00	50.00	75.00		
JUGLANS, White Walnut	30.00	40.00	50.00		
JUGLANS, Black Walnut	17.50	20.00	30.00		
LIQUIDAMBAR,					
Sweet Gum	17.50	20.00	25.00		
LITODENDRON,					
Tulip Poplar	7.50	10.00	15.00		
MORUS, Russian					
Mulberry	7.50	10.00	15.00		
NYSSA, Sour Gum	25.00	35.00	45.00		
OXYDENDRUM,					
Sourwood	12.50	15.00	20.00		
PLATANUS, American					
Sycamore	12.50	15.00	20.00		
POPULUS, Chinese					
Lombardy	20.00	25.00	35.00		
Poplar	15.00	20.00	25.00		
QUERCUS, White Willow					
or Red Oak	20.00	30.00	40.00		
ROBINIA, Black Locust	4.00	6.00	10.00		
SALIX, Golden Weeping					
Willow	12.50	15.00	20.00		
SALIX, Babylon Willow	12.50	15.00	20.00		
TELLIA, American Linden	20.00	30.00	40.00		
ULMUS, American Elm	5.00	7.00	10.00		
ULMUS, Chinese Elm	8.00	10.00	15.00		

Write for our complete catalog.

Boyd
NURSERY COMPANY

P. O. Drawer 71, McMinnville, Tenn.

plants usually associated with this habit, such as nandina and wax privet. I believe it is hardier than boxwood also and am sure it would grow in southern Connecticut. Here our criterion for hardiness is to recall how the plant came through the winter of 1933 and 1934. The osmanthus came through better than most of the plants that we call "plants of the upper south" and showed no more damage than did American holly, abelia or California privet.

The plant thrives well either in the sun or shade and likes soil with plenty of humus without being critical, as are rhododendrons and azaleas.

Propagation is best by cuttings, although slow. I recall in the days before hormones that a batch of cuttings in peat and sand, the best medium for them, stayed in the frame a full year before rooting well, yet eventually gave almost 100 per cent stand. The hormones shorten this considerably, but peat and sand are still the best medium. To grow the plants for sale is still a lengthy proposition, for they belong, according to time required, with the dwarf yews. The finished plant, however, is well worth the trouble. It is our experience that holly osmanthus is one plant of which there is never an oversupply.

E. S. H.

COVER ILLUSTRATION.

Picea Glauca Conica.

Sometimes called the dwarf Alberta spruce, *Picea glauca conica* is quite unlike other spruces in shape and appearance. The tree is narrow and conical in form, presenting a solid surface of dense foliage. The leaves are soft grass-green, about one-half inch in length, fine, slender and flexible, and spread radially from the twigs. The short, closely set, twiggy branches carry a thick growth of this attractive foliage.

Quite hardy in the north, the tree is tender in one respect. If exposed to the south, it may be burned by winter sun and winds. Providing a winter screen on the south side will prevent such sunscald.

Exceedingly slow-growing, the dwarf Alberta spruce is useful in the less exposed places in the rock garden, on terraces and in formal effects. It may be only two and one-half feet high or less when 10 years old and consequently is a costly nursery item.

This dwarf spruce has been propagated from cuttings taken from a single small tree discovered in Alberta in 1904 by J. G. Jack and sent by him to the Arnold Arboretum

ORDER NOW

CHERRY, Montmorency,	Early Richmond.	Per	Per
2-yr.-old.		100	1000
1-in. up, 5 ft.	\$85.00		
11/16 to 1-in., 4 1/2 ft.	75.00		
9/16 to 11/16-in.,			
4 1/2 ft.	65.00		
7/16 to 9/16-in., 4 ft.	55.00		
1-yr.-old.			
9/16 to 11/16-in.,			
3 ft.	60.00		
7/16 to 9/16-in., 3 ft.	45.00		
5/16 to 7/16-in.,			
2 1/2 ft.	30.00		

CHINESE ELM, seedlings,	2-yr.-old.		
9 to 12 ins.			\$ 6.50
12 to 18 ins.			11.00
18 to 24 ins.			15.00
2 to 3 ft.			3.00
3 to 4 ft.			6.50
4 to 5 ft.			9.50
5 to 6 ft.			15.00

PRIVET, AMUR RIVER	NORTH.		
12 to 18 ins.			4.50
2 to 3 canes.			
12 to 18 ins.			5.50
3 to 4 canes.			

PRIVET, THOMPSON.	18 to 24 ins.		
18 to 24 ins.			7.50
4 to 6 canes, 2-yr.			
18 to 24 ins.			10.00
6 canes up, 2-yr.			

POPLARS, LOMBARDY.	Branched, 5 to 6 ft.		
Branched, 4 to 5 ft.			11.00
Whips, 5 to 6 ft.			10.00
Whips, 4 to 5 ft.			7.50
Whips, 3 to 4 ft.			5.00
Whips, 2 to 3 ft.			4.00

PURPLE LEAF PLUM,	Newport.		
5 to 6 ft.			90.00
4 to 5 ft.			75.00
3 to 4 ft.			60.00

FLOWERING PEACH.	Double red.		
5 to 6 ft.			65.00
4 to 5 ft.			55.00
3 to 4 ft.			45.00

THUJA ORIENTALIS.	Chinese Arborvitae, 2-yr.		
9 to 12 ins., sdgs.		4.00	30.00

PINUS NIGRA.	Austrian Pine, 1-yr.		
2 to 4 ins., sdgs.		4.00	35.00

JUNIPERUS VIRGINIANA.	Platte River, 1-yr.		
2 to 4 ins., sdgs.		2.50	20.00
4 to 6 ins., sdgs.		3.50	30.00

30 at 100 rate; 300 at 1000 rate.			

Packing FREE.

M. MEYER'S NURSERY

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Nursery Manual.....\$5.00

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FRUIT TREES • SMALL FRUITS • SHRUBS • ROSES • ORNAMENTALS

APPLE - PEACH - PEAR - PLUM

Write for Prices

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CHIEF

	Per 100	Per 1000
Transplants	\$7.00	\$60.00
1/4-in. cal. and up.	6.50	55.00
No. 1, 3/16-in.	5.50	45.00
INDIAN SUMMER		
Transplants	8.00	70.00
1/4-in. cal. and up.	7.50	65.00
No. 1, 3/16-in.	6.50	55.00
LATHAM		
Transplants	7.50	65.00
1/4-in. cal. and up.	7.00	60.00
No. 1, 3/16-in.	6.00	50.00
SUNRISE		
Transplants	7.00	65.00
1/4-in. cal. and up.	6.50	55.00
No. 1, 3/16-in.	5.50	45.00

BLACK RASPBERRIES

CUMBERLAND

Transplants
No. 1, tips

NEW LOGAN

No. 1, tips

Per 100	Per 1000
\$8.00	\$70.00
4.50	35.00

4.50 35.00

SINCE
1872

NURSERY
COMPANY

FARIBAULT

MINNESOTA

from Lake Laggan, in the Canadian Rockies. The annual growth is said to be only one-half to one inch, so that many years are required to produce a sizable tree in the nursery.

NURSERYMAN'S DAUGHTER WEDS PROFESSOR'S SON.

Gladys Gene Mathews, daughter of Mr. and Mrs. Irving Mathews, of Mathews Nursery & Seed Co., Gary, Ind., was married December 28 to Donald N. O'Rourke, son of Prof. and Mrs. F. L. O'Rourke, East Lansing, Mich. Professor O'Rourke is associated with the department of horticulture at Michigan State College and is in charge of the course in nursery and landscape management.

The couple is at home at Scottsville, Mich., where Mr. O'Rourke is teaching agriculture to veterans of Mason county. Mrs. O'Rourke taught home economics at the Kingwood School for Girls of Cranbrook, Bloomfield Hills, Mich.

Providing the background for the ceremony was a 28-foot Christmas tree presented to the Forty-third Avenue Presbyterian church by the Mathews family, which it had used as a living Christmas tree sixteen years ago.

APPLE SEEDLINGS

Washington-grown from Minnesota Seeds.
Write for Prices.

BLACKBERRIES — BOYSENBERRIES

ALFRED, No. 1, R.C.	Per 100	Per 1000
BLOWER, No. 1, R.C.	\$5.00	\$40.00
ELDORADO, No. 1, R.C.	5.00	40.00
BOYSENBERRY, Thornless, No. 1, tips.	5.50	45.00
YOUNGBERRY, No. 1, tips.	5.50	45.00

CURRENTS

RED LAKE	Per 100	Per 1000
3-yr., No. 1	\$18.00	\$160.00
2-yr., No. 1	16.00	140.00
1-yr., No. 1	12.00	100.00

RHUBARB

CANADA RED	Per 100	Per 1000
No. 1, div.	\$40.00	\$350.00
MacDONALD	30.00	250.00
No. 1, div.	25.00	150.00
RUBY RED		
No. 1, div.	35.00	300.00
VALENTINE		
No. 1, div.		

SPRING IS COMING!

Time flies after January first and Spring shipping time always comes early. To avoid disappointment and to be sure of the best, place your order NOW for

VIRGINIA SEASIDE ROSES

Our roses are strong, vigorous and extra well rooted, sure to grow and give your customers complete satisfaction. Our list is most complete and includes many patent varieties. Roses are scarce; send us your order TODAY.

ILGENFRITZ NURSERIES, Inc.

THE MONROE NURSERY

MONROE, MICH.

TAXUS MEDIA HALLORAN

The past winter proved this variety to be very well adapted for the middle western climate. We have 1, 2 and 3-year liners to offer.

VERKADE'S NURSERIES

NEW LONDON, CONN.

MAXWELL, BOWDEN & RICE

Incorporated
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Again

We offer for Spring, 1950 50,000 Juniperus Grafts

(Grafted on Red Cedar)

ORDER NOW

before certain kinds are sold out.

It's quality that counts.

Per 100 Per 1000

Juniperus chinensis

<i>columnaris glauca</i>	47.50	450.00
<i>keteleeri</i>	47.50	450.00
<i>compacta</i>	47.50	450.00
<i>mascula</i>	47.50	450.00
<i>pyramidalis</i>	47.50	450.00

Juniperus virginiana

<i>burki</i>	47.50	450.00
<i>canaertii</i>	47.50	450.00
<i>canaertii compacta</i>	47.50	450.00
<i>elegantissima Lee</i>	47.50	450.00
<i>glauca</i>	47.50	450.00
<i>schottii</i>	47.50	450.00
<i>pyramidalis hillii</i>	47.50	450.00

Juniperus squamata

<i>meyeri</i>	47.50	450.00
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Biota aurea nana

<i>compacta</i>	45.00	425.00
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Biota

<i>conspicua</i>	45.00	425.00
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Picea pungens

<i>moerheimii</i>	95.00
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Acer polymorphum

<i>ashi-beni</i> (the best red)	90.00
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Out of Pots and Beds

2000 <i>Juniper</i> , Pfizer,	Per 100 Per 1000
8 to 10 ins., 1-yr., 2½-in. pots	\$27.50 \$250.00
1000 <i>Juniper</i> , Pfizer, 8 to 12 ins., strong, out of beds	42.50 400.00
1000 <i>Taxus hicksii</i> , 12 to 18 ins., strong, 3-yr. beds	45.00 450.00
1000 <i>Arborvitae</i> , pyra- midalis, 6 to 8 ins., 2½-in. pots, out of frame	25.00

PAUL OFFENBERG NURSERIES

COLUMBUS 9, OHIO

OBITUARY

W. W. Wilmore.

William W. Wilmore, pioneer Colorado horticulturist and founder of W. W. Wilmore Nurseries, Denver, died January 1 after a lingering illness of many months. He was 88 years old.

The youngest in a family of eight, Mr. Wilmore was born at Laurel, Md., in 1861. The family moved to Colorado in 1873, locating in the Valverde area of Denver, where it followed the vocation of truck gardening.

When he was 23, Mr. Wilmore purchased ten acres of land at West Thirty-eighth and Wadsworth avenues, where the nurseries are still located, and started growing and hybridizing dahlias as a hobby. Gradually this hobby developed into a business, called W. W. Wilmore Dahlia Farm & Nursery, becoming one of the best known dahlia farms in the country. Mr. Wilmore was regarded as an authority on dahlias for more than fifty years. He issued his first dahlia catalog in 1893, and he was generally credited with popularizing the flower.

With the aid of his sons, Charles and Scott, Mr. Wilmore formed his nursery business. He retired in 1927, and Scott now heads W. W. Wilmore Nurseries and Charles heads the Green Bowers Nurseries near by. An elder son, W. W. Wilmore, Jr., was killed at St. Mihiel in World War I.

Mr. Wilmore took an active part in the development of the Wheat Ridge section of Denver as a businessman, banker and civic leader. He was a life member of the Society of American Florists and of the Colorado State Grange. His firm is a member of the American Association of Nurserymen and the Colorado Nurserymen's Association.

Surviving are his widow, Mrs. Josephine Ely Wilmore, whom he married sixty-three years ago; two sons, Scott and Charles; two daughters, Mrs. R. T. Davis and Mrs. Waldo Von Holdt; six grandchildren, and six great-grandchildren.

Ross G. Minich.

Ross G. Minich, proprietor of R. G. Minich Nurseries, Overland Park, Kan., died December 24 at his home. He was 64 years old. A native of Missouri, Mr. Minich had lived at Kansas City for about thirty years.

Survivors are his widow, Mrs.

PFITZER JUNIPER LINERS

5 to 8 ins., in plant bands for field planting.

Will outperform much larger bare-root plants and cost you less money.

Book your order
for spring.

Immediate or later delivery if wanted.

We winter everything
in the greenhouse.

300 or more,
\$13.50 per 100.

Less than 300,
\$15.00 per 100.

Free samples on request.

McININCH GREENHOUSES ST. JOSEPH, MO.

HEMLOCKS

Specimen stock transplanted 4 and 5 times. Sheared and open styles. In large truckload lots. Select them yourselves. 3, 3½, 4, 4½ and 5-ft. sizes. We grow the finest. Write for full particulars. We are taking spring orders now. Discounts on quantity orders.

We have *Taxus hicksii* and *Taxus capitata*. Also, a few *Bell Carriers* in stock. Saves hard lifting—fewer men needed.

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George Colmorgen, Prop.
Rt. 84, Lake Co. PERRY, OHIO

EVERGREENS

SHRUBS
SHADE TREES
POPLARS

Write for surplus list.

THE HENRY NURSERIES

Ingels Bros.
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TUBEROUS BEGONIAS

by Worth Brown
Covers propagation by seed, vegetative propagation, growing from tubers, pot culture, lath houses, care of dormant tubers, pests and disease. 128 p., 105 illus. (1948). \$2.75, postpaid.

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Sprinkler Sales Make Profits for Nurseries



And nursery sales drop lawn sprinkler prospects in your lap. Think how many you could have sold last year if you had been a dealer!

You don't have to be an expert; we furnish engineering service FREE. Our systems come in three price ranges, can be sold on easy FHA terms through banks. They're years ahead in engineering, offer automatic features and other conveniences that clinch sales.

Dealership Plan for Nurseries and descriptive literature FREE on request. Write today for both.

TEXAS LAWN SPRINKLER CO., INC.

5422 RED FIELD STREET

LAKESIDE-3149

DALLAS 9, TEXAS

Edith C. Minich; a son, Charles Robert Minich; two sisters; a brother, and a grandson.

W. L. Thompson.

W. L. Thompson, head of the nursery and landscape department of Muzingo Flower Farm, Tulsa, Okla., died December 23. He was stricken with a heart attack while viewing the Christmas decorations at the Muzingo Boston flower shop.

Mr. Thompson had been employed at Muzingo Flower Farm for the past four years. Before that he worked as a landscape architect in various parts of the country, including Tennessee, where he worked on the Ford Motor Co. project.

Surviving are his widow, several children and a brother, all of Lonoke, Ark., where Mr. Thompson owned Thompson's Nursery.

JUST starting in the nursery business is W. Albert Docking, 407 Market street, Bangor, Pa.

HAVING formerly leased land from Swain Nelson Co., at 2320 Glenview road, Glenview, Ill., G. A. Gundstrom has been doing business since December 15 as Gundstrom Co., Inc., on property purchased at 2001 Waukegan road, Glenview.

NORTHERN-GROWN EVERGREENS

SPRUCE - JUNIPER

TAXUS - ARBORVITAE

Write for list.

BROWN DEER NURSERIES

P. O. Box 1747

Milwaukee 1, Wis.

ORNAMENTALS TREES SHRUBS EVERGREENS

Wholesale growers of a general assortment for the best landscape plantings.

BRYANT'S NURSERIES
Princeton, Illinois

LAKE'S SHENANDOAH NURSERIES Shenandoah, Iowa.

Wholesale growers of a fine assortment of
GENERAL NURSERY STOCK
Your inquiries will be appreciated.

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GROWERS EXCHANGE, Inc.
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We wish to purchase..
Evergreens, Fruit Trees,
Shrubs, etc.
Send your surplus list to
THE PONTIAC NURSERY CO. Romeo, Mich.

EVERGREENS

PYRAMIDAL ARBORVITAE,

4 to 5 ft.

An excellent supply of this most popular item.

GRAFTED JUNIPERS, 4 to 5 ft.

Juniperus virginiana canaertii

Juniperus virginiana glauca

Juniperus virginiana burki

Sheared, well grown.

We have a general line of evergreens.

Write for Quotations.

THE BERRYHILL NURSERY CO.

P. O. BOX 696, SPRINGFIELD, O.

Northern-grown Stock

Send
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Price
List.

J. V. BAILEY NURSERIES
St. Paul 6, Minn.

**SPECIMEN
LANDSCAPE MATERIALS**

Our Specialty

TAXUS

W. A. NATORP CO.
Cincinnati 29, Ohio

	Per 100
Kolkwitzia, T, 9 to 12 ins.....	\$12.00
Kolkwitzia, S, 6 to 9 ins.....	9.00
Rhus cotinus, S, 3 to 6 ins.....	6.00
Rhodotypos, S, 3 to 6 ins.....	3.50

NEWPORT NURSERY CO.
NEWPORT, MICH.



EVERGREENS

Growers of Quality Evergreens
Lining-out Stock a Specialty

Write for Trade List

EVERGREEN NURSERY CO.
Established 1864 : STURGEON BAY, WIS.

ROTOGRAVURE FEATURES MUSSER CHRISTMAS TREES.

A 2-page spread in the rotogravure section of the December 18 edition of the Pittsburgh Press depicted the growing, cutting and shipping of Christmas trees at Musser Forests, Inc., Indiana, Pa. According to the article, Fred Musser has over 19,000,000 Christmas trees and is the nation's largest grower. In December about 200,000 trees were shipped to eastern markets.

The main nursery of Musser Forests, Inc., is located on a hilltop near Indiana, Pa., where ten varieties of spruces and pines are grown. Seeds from cones gathered in forests in this country and Europe germinate two years after planting and are transplanted in beds, 100,000 seedlings to the bed. In spring, when the biggest job is transplanting, the firm employs about 150 workers. Seedlings are fastened to a planting board by small wire rings, a shallow trench is dug to receive the roots and the seedlings are inserted, fifty to a row. After the soil is tamped around the roots, the planting board is removed.

After transplanting the seedlings are kept free from weeds and are watered by a sprinkler system supplied with water from two reservoirs which Mr. Musser had built. Six years after transplanting the seedlings are ready to be cut and used as Christmas trees.

Cutting of pines starts in October, since they hold their needles longer, but spruces are cut much later, as they shed their needles in several weeks. Extra men are employed for the Christmas rush, to cut and tie the trees in bundles of the same size and species. Trees are shipped by train, truck and trailer to many sections of the country, and the average wholesale price is \$1 each.

Those trees not suitable for cutting as Christmas trees are saved for timber. A 50-acre tract of seedlings will grow into about \$15,000 worth of lumber in twenty-five years.

DONATES ROSES TO CITY FOR BEAUTIFICATION.

An extensive beautification and cleanup campaign has been launched at Marianna, Fla., by civic and business leaders as a result of an offer by Charles O. Reiff, Chipola Nurseries, Marianna, made at a meeting of the local Rotary Club, to donate 1,000 rosebushes to a city-wide beautification program. Members of the planning committee, among whom are Mrs. Reiff, recently discussed

SPECIAL—

Entire planting of Hicksi Yew

60	24 to 30 ins., B&B
290	18 to 24 ins., B&B
220	12 to 18 ins., B&B
400	9 to 12 ins., TT
350	6 to 9 ins., TT
200	6 to 9 ins., T

All heavy, first-class plants. Will make an attractive price on the entire lot.

Write for complete surplus list.

WHITE ELM NURSERY CO.

HARTLAND, WIS.

Let **SHERMAN'S** supply
your needs in...

Apple Trees
Plum Trees
Cherries
Small Fruits
Ornamental Shrubs
Shade Trees
Phlox
Roses
Perennials

Write for quantity prices on the
above.

SHERMAN NURSERY CO.
CHARLES CITY, IOWA

VIBURNUM BURKWOODI

New—Fragrant—Hardy
Pinkish-white flowers in May
Heavy pot-grown stock for lining
out. Spring, 1950, delivery.

Per 100 Per 1000
2½-in. bands \$27.50 \$250.00
F.O.B. Dayton, Ohio

No charge for packing if check
accompanies order.

THE SIEBENTHALER COMPANY
3001 Catalpa Drive
DAYTON 5, OHIO

THORNLESS HONEY LOCUST

	Per 10	Per 100
6 to 8 ft.....	\$15.00	\$135.00
8 to 10 ft.....	17.50	150.00
1¼ to 1½-in. cal.....	22.50	200.00

HACKBERRY, OCCIDENTALIS

6 to 8 ft.....	12.50	100.00
8 to 10 ft.....	15.00	135.00
1¼ to 1½-in. cal.....	20.00	175.00

Free packing. Cash, please.

FOREST HILLS NURSERY
3736 HIGHLAND DR.
SALT LAKE CITY 6, UTAH

BURTON'S

HEADQUARTERS FOR
EVERGREEN GRAFTS, TRANSPLANTED
EVERGREENS, SHRUB LINERS.
RARE ITEMS YOU DO NOT
FIND IN MOST LISTS!
Write!
HILLTOP NURSERIES
CASSTOWN, OHIO

SCARFF'S Nursery

Headquarters for Small Fruit Plants

RED, BLACK and PURPLE RASPBERRIES
 BLACKBERRIES—BOYSENBERRIES—BLUEBERRIES
 Currants—GOOSEBERRIES—GRAPEVINES
 NEW VALENTINE ALL-RED RHUBARB
 PARADISE ASPARAGUS—VICTORIA RHUBARB



ORNAMENTAL SHRUBS

Here are a few Special Items

Buddleia (in variety), 2 to 3 ft.	Magnolia Soulangiana Nigra
Hamamelis Vernalis, 4 to 5 ft.	Moss Balls, 3 to 4, 4 to 5 ft.
Prunus Tomentosa, 3 to 4 ft.	LINING-OUT STOCK
Spirea Prunifolia, 3 to 4 ft.	Calycanthus Floridus,
Spirea Vanhouttei, 2 to 3.	S, 6 to 9, 9 to 12 ins.
3 to 4, 4 to 4½ ft.	Kolkwitzia Amabilis,
	T, 9 to 12, 12 to 15 ins.
	Rhus Cotinus, S, 6 to 9 ins.



FRUIT TREES

Well Grown—Heavily Rooted

	11/16-in.	9/16-in.	7/16-in.
Plum, 2-yr. (assorted varieties)	\$60.00	\$45.00	\$35.00
Sweet Cherry, 1-yr. (assorted varieties)	75.00	60.00	
Pear, 2-yr. (assorted varieties)	50.00	40.00	30.00

Send for Complete Trade List.

W. N. SCARFF'S SONS

New Carlisle, Ohio

planting possibilities and made a tour of the city to select tentative sites for the rose plantings. The city government will provide the labor to make the plantings, and Gus Purvis, local nurseryman, will supervise it. Local producers will supply the necessary fertilizer.

MOWRY RESIGNS IN FLORIDA.

Announcement that the application for retirement of Harold Mowry, director of the Florida agricultural experiment stations, has been approved by the state board of control has been made by Dr. J. Hillis Miller, president of the University of Florida. The retirement will become effective January 31. Mr. Mowry joined the experiment station staff in 1922 as assistant horticulturist and rose through various positions to be director in 1943. Mr. Mowry is credited with the initial findings as to the value and need for zinc for plant growth on mineral soils of Florida.

HAVING been associated with the Fillmore County Nursery, Canton, Minn., for the past three and a half years, Ralph Kneeskern opened the Harmony-Decorah Nursery and Landscape Service at Harmony, Minn., and Decorah, Ia. in December.

EUONYMUS VEGETUS

2 1/4-in. pots

\$20.00 per 10

\$15.00 per 100

Trade list on request.

THE COTTAGE GARDENS
N.W. KRIEK
LANSING 15, MICH.

WELLER'S PERENNIALS
 With That Wonderful Root System
 Headquarters for
HARDY MUMS AND PHLOX.
 Ask for our Perennial Catalog.
WELLER NURSERIES CO., Inc.
 Leading Perennial Growers
 HOLLAND, MICH.

50,000 DAHLIA ROOTS

We grow many acres of standard cut flower varieties for the trade.

Write today for wholesale price list.

PAYNE DAHLIA FARMS
 ROUTE 5 KANSAS CITY 3, KAN.

WE HAVE IN QUANTITY

Apple, 2 and 3-yr.
 Pear, 2 and 3-yr.
 Cherry, 1 and 2-yr.
 Plum, 1 and 2-yr.
 Apricot, 1 and 2-yr.
 Peach, 1-yr.

Thurlow Weeping Willow,
 5 to 6 ft., up to 2-in.

Lombardy Poplar, 5 to 6 ft., up to 2-in.

Arborvitae, Pyramidal; Juniperus columnaris, glauca, keteleeri, Hill's Dundee, up to 3 1/2 to 4 ft. Pfitzer Juniper, 15 to 18 and 18 to 24 ins. Austrian and Scotch Pine, heavily sheared, 4 to 5, 5 to 6 and 6 to 7 ft.

C. M. HOBBS & SONS, Inc.
 Phone: Indianapolis, Belmont 1812
 BRIDGEPORT, IND.

GLADIOLI

will pay dividends at the nursery in the sale of bouquets to visitors, and the flowers bring in visitors.
 1000 mixed, flowering-size bulbs, 12 or more colors, our collection "N", \$16.50.
 Post card brings catalog.

VENNARD'S NURSERY
 BOX 394-N SIOUX CITY, IOWA

AMERICA'S BEST SOURCE

FOR

HARDY PLANTS

WRITE FOR
 TRADE LIST

Wayside Gardens



**Beautiful
NATIVE RED CEDARS**

	Per 1000
5 to 10 ins.	\$20.00
10 to 15 ins.	35.00
15 to 24 ins.	\$ 7.50
2 to 3 ft.	12.50
3 to 4 ft.	17.50

APPLE and PEACH TREES

	Per 100
2 to 3 ft.	\$ 8.00
3 to 4 ft.	12.00
4 to 5 ft., while they last.	20.00

APPLE TREES Per 100

5 to 6 ft., while they last.	\$30.00
Also other bargains.	

Will not be able to supply demand again this season. First come, first served.

Write for our new, very low prices on nursery stock. Big reductions.

ROLLERS NURSERY

Phone: 661 ROGERS, ARK.

QUALITY STOCK

In Good Quantity

Excelsa Arborvitae,	Each
24 to 30 ins.	\$1.25
30 to 36 ins.	1.50

Baker Arborvitae,	
24 to 30 ins.	1.30
30 to 36 ins.	1.50

Spiny Greek Juniper,	
15 to 18 ins.	1.25

Write for list of other stock.

See our classified ads on Hydrangeas, Chinese Elms and Quality Evergreen Liners.

VERHALEN NURSERY CO.
SCOTTSVILLE, TEXAS
Your Profits Grow in Verhalen Plants.

**HEAVY 2-YR. SHRUBS
FRUIT TREES**

SPECIMEN EVERGREENS

LINING-OUT STOCK

SNEED NURSERY COMPANY

P. O. Box 798
Oklahoma City 1, Okla.

Wholesale growers of the best
Ornamental Evergreens,
Deciduous Trees
Shrubs and Roses
Write for our current trade list.

THE KALLAY BROTHERS CO.
Painesville, Ohio

**ROSES BY AIR
TO PHILIPPINES.**

Orders are received from all corners of the globe in larger quantities than ever before, thanks to the fast transportation of today, says Gerald K. Klyn, rose grower at Mentor, O. Before air express was possible it would take many weeks for plants to reach distant places, and then most would arrive in bad condition.

The love for roses apparently was never more expressed by a rose lover in the Philippines than by Mrs. Pacita M. Socorro, who imports some roses every year. But Mr. Klyn, who has been growing and shipping roses for thirty years, was greatly surprised when this same lady placed an order for some 500 roses to be shipped by air express. The shipping charges would amount to between \$800 and \$900 for one box weighing about 500 pounds. But the lady wanted the roses regardless, saying, "When shipped by air express I know they will arrive in good condition" and "The joy I will derive from their flowers will compensate me greatly for the expense incurred."

**LONG ISLAND INSTITUTE
STARTS EXPANSION.**

H. B. Knapp, director of the Long Island Agricultural and Technical Institute, Farmingdale, has announced that the institute's 3-year expansion program is under way. The project will combine the industrial-technical facilities with those of agricultural and ornamental horticulture.

The two new buildings on which construction has begun will house shops, laboratories, library, administrative offices, an auditorium-gymnasium and a heating system. About forty additional acres have been purchased by the institute to be used for parking facilities, playing fields and lawn areas.

ON MINNESOTA STAFF.

Two recent additions to the horticulture staff at the University of Minnesota are Richard Widmer, instructor in horticulture, and Orrin C. Turnquist, extension horticulturist.

Mr. Widmer is a native of New Jersey and holds B.S. and M.S. degrees from Rutgers University. In that state he had experience as a soil analyst and victory garden consultant, field supervisor and greenhouse section foreman. He assists with teaching and research in the floriculture section of the division of horti-

ROSES

2-year, Budded

**For Forcing
and Landscaping**

WRAPPED—WATERPROOF
PAPER AND COLORED LABELS
FIVE CENTS ADDITIONAL

3-day Truck Service to Points East.

500 Lots and Over
No. 1, 40c—No. 1 1/2, 30c—No. 2, 25c

100 to 500 Lots
No. 1, 45c—No. 1 1/2, 35c—No. 2, 30c

Orders for less than 100 roses
No. 1, 50c—No. 1 1/2, 40c—No. 2, 30c

List of Varieties — Hybrid Tea Everblooming
Roses, 2-yr., Field-grown, Budded on Japonica
Rootstock.

REDS

Red Radiance
Etoile de Hollande
Pointsettia

Am. Leonard
Rouge Mallerin
Red Tallisman

PINKS

Pink Radiance
Editor McFarland
Pink Columbia
Briarcliff

WHITES

Kathleen A. Viktoria
—H. P.

YELLOWS

Luxembourg
Golden Dawn
Mrs. P. S. du Pont

Golden Ophelia
Sunburst

Rosy
Yellow Tallisman
Golden Charm

**VARIEGATED or
MULTICOLOR**
President Hoover
Tallisman

POLYANTHA ROSES
—BABY ROSES
Improved Lafayette

CLIMBING ROSES
Paul's Scarlet
Red Radiance
Cl. Tallisman

CL. ROSES
Cl. Red Tallisman
F. K. Druschki—
H. P.

Mrs. P. S. du Pont
Red American Beauty

USUAL TERMS AND CONDITIONS

Delivery New or Late Spring.

Place your order today.

OKZARKS PLANT FARMS, Inc.
523 SEMINOLE DRIVE SPRINGFIELD, MO.

LIGUSTRUM IBOIUM
Hardy California Privet.

Per 100 Per 1000

2 to 3 ft., br. \$4.50 \$37.50
18 to 24 ins., br. 3.50 27.50
12 to 18 ins., br. 3.00 22.50
12 to 36 ins., row-run... 3.00 25.00

LONICERA JAPONICA
HALLIANA

2-yr., tr. 7.50 60.00
1-yr., tr. 6.00 45.00
Rooted div., liners.... .75 6.00

VINCA MINOR Hardy Myrtle.
Medium clumps 3.50 30.00
Rooted div., liners.... .60 5.00
5 per cent discount for cash with order.

McMINNVILLE TREE CO.
Box 125 McMINNVILLE, TENN.

**COMPLETE ASSORTMENT
OF**

**Evergreens, Fruit Trees, Shade
Trees, Roses and Lining-out Stock.**

Write for complete list.

ONARGA NURSERY CO.
ONARGA, ILL.

Chipman's

RED RHUBARB

Large, No. 1 divisions, \$15.00 per 100.
Cash with order; packing free.

Write for prices on larger quantities.

KEELER'S GARDENS
SIOUX FALLS, S. D.

No Weed Problem Here! →

Soil was treated before planting with

DOWFUME MC-2

No laborious hand weeding is needed here—because weed seeds were killed by soil fumigation with Dowfume MC-2 before planting was done.

Dowfume MC-2 has shown excellent results—both with seedlings grown under glass and in the field. This new Dow soil fumigant kills most of the weed seeds present in the soil—also controls nematodes and other root-attacking parasites. At higher dosages, it controls many soil-borne plant diseases. It is easy to apply—does a thorough job throughout the tilled layer of soil—aerates quickly to permit planting within 48 to 72 hours.



Uniform, vigorous eggplant seedlings growing in flats treated with Dowfume MC-2 before planting.



THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN

culture at the University of Minnesota. The section is now in the charge of Robert A. Phillips, since Dr. L. E. Longley retired last June.

Mr. Turnquist served as horticulturist at the Crookston experiment station and did some potato variety testing and breeding work before joining the agricultural extension service at the University of Minnesota last October.

FLOWER GROWER CHANGES.

Theodore A. Weston has been promoted to executive editor of the Flower Grower. Before joining Flower Grower as managing editor four years ago, Mr. Weston was associated with the Florists' Exchange.

Charles R. Schumacher has been appointed advertising manager of Flower Grower. He formerly worked on the garden pages of the New York Times, the New York Herald-Tribune and House Beautiful.

WALLACE E. PIPPERT, of the Pippert Nurseries, Inc., Cleveland, Wis., has accepted a temporary position as assistant sales manager with the Trauernicht Nursery Co., Fort Worth, Tex. He will return to his home in time to resume his duties there at the beginning of the spring season.

QUALITY JUNIPER GRAFTS

For Spring, 1950, delivery, from 2½-in. pots on Virginiana understock.

We are grafting *Juniperus virginiana canaerii*, *glauca*, *pyramidaliformis* (Dundee), *burki* and *keteeleeri*.

PAUL ARTERBURN NURSERY
BOX 72 ST. MATTHEWS, KY.

We Offer FOR SPRING AND FALL

An extra-fine lot of
**Peach — Plum — Grape — Apricot
Cherry, Sweet and Sour**
Can furnish carloads.

Also **Shrubs, Evergreens and Shade
Trees.**

Send us your want list.

COMMERCIAL NURSERY CO.
Nicholson Bros. DECHERD, TENN.

30,000 Potted Taxus Liners

1, 2 and 3-year.
**Weigela Eva Rathke, transplants.
Viburnum Rhizidophyllum.**

HUMPHREYS LANDSCAPE SERVICE
MT. STERLING, KY.

WE OFFER IN QUANTITY

Abelia Grandiflora, 6 to 12 ins.; 12 to 18 ins., b.r.; 18 to 24 ins., b.r.; 2 to 3 ft., b.r.

White-flowering Dogwood, Amur River South Privet and Calycanthus seedlings, 6 to 12 ins.; 12 to 18 ins.; 18 to 24 ins.

White Walnut, seedlings, 12 to 18 ins.; 18 to 24 ins.; 2 to 3 ft.; 3 to 4 ft.

Red Cedar, transplants, and **Flowering Shrubs.**

Write for price list.

THE ARNOLD C. CLARK NURSERY

Phone: D 722

ROUTE 2 McMinnville, TENN.

SERVING YOU SINCE '72

FROM
THE CENTER OF THE SOUTH

THE Southern
Est. 1872
Nursery & Landscape Co., Inc.
WINCHESTER, TENNESSEE

Phone-Write-Wire for Quotations

GRAPE CUTTINGS

CONCORD and FREDONIA, \$3.50 per 1000, F.O.B. here. Tied with wire, 100 to bunch. Guaranteed true-to-name. Cut from our young, thrifty vineyard by experienced workmen.

IDEAL FRUIT FARM STILWELL, Okla.

WE OFFER FOR SPRING, 1950 SHADE TREES

CORNUS FLORIDA
SWEET GUM
RIVER BIRCH
RED MAPLE

CERCIS CANADENSIS
TULIP TREE
SUGAR MAPLE
WHITE ASH

8 to 10 ft., well branched, bare root.....	Per 100 \$100.00
10 to 12 ft., well branched, bare root.....	150.00

The above prices are for truck or carload lots. We do not box or bale large stock like this. We can make delivery by large trailer truck at 20c per mile both ways; smaller truck, 10c per mile both ways.

We refer you to our ad in the Jan. 1 issue for B&B Azaleas and Kalmia.

O. H. PERRY NURSERY CO.

BOX 545

McMINNVILLE, TENN.

WE OFFER FOR SPRING, 1950

Ligustrum Amurense
Ligustrum Ibolium
Ligustrum Ovalifolium
Ligustrum Sinense
Weigela Rosea
Weigela Hendersoni

Kerria Japonica
Cydonia Japonica
Spiraea Opulifolia (Physocarpus).
Ninebark
Spiraea Prunifolia. Bridal Wreath

The above is a first-class, field-grown stock. We have a very good supply of all items. Write us for prices or send your want list.

O. H. PERRY NURSERY CO.

BOX 545

McMINNVILLE, TENN.

The Homestead Nurseries HG Benckhuysen. Boskoop. Holland

Azaleas, Rhododendrons, Magnolias, Peonies, Ornamental Trees and Shrubs, Perennials—Quality Stock in All Leading Varieties. Trade catalog on request.

WILLIAM VAN HERREWEGHE
(formerly W. E. & R. Van Herreweghe)
Export Nurseries
SERSKAMP, near GHENT, BELGIUM
FRUIT TREE STOCKS
EAST MALLING TYPES
ORNAMENTAL SHRUBS
FOREST PLANTS and Seedlings
ROSES and EVERGREENS
Prices on application.

BUY HOLLAND-GROWN PLANTS
Acer platanoides "Faassen's Black," new variety.
Rosebushes.
Nursery stock.
Forest plants, all varieties.
Avenue trees.
Ask lowest prices and quantities required.

J. H. FAASSEN-HEKKENS
Holland's most extended nurseries.
TEGELEN, HOLLAND

EAST MALLING CLONAL FRUIT TREE STOCKS

STILL AVAILABLE

East Malling II, IV, VII and XVI.

Quince type B; Myrobalan B.

ENGLISH VARIETIES OF GOOSEBERRIES

Layers for lining-out, \$20.00 per 100.

Gold Coin, Cossen's sdg., Leveller, London and Lancer.

MANTEN'S NURSERY,
WHITE ROCK., B.C., CANADA

Holland-Grown Nursery Stock

Shrubs and Trees,
including liners.

Rhododendrons and Azaleas
Hardy Perennials
Peonies

NOVELTIES IN ALL LINES
Ask for wholesale catalog.

F. J. Grootendorst & Sons

BOSKOOP, HOLLAND

Growers and exporters since 1903

AMERICAN NURSERYMAN

ALL-PURPOSE ROTARY GARDEN TRACTOR.

The Cultiller Corp., New Brunswick, N. J., manufacturer of a 2-wheel, 3-horsepower garden tractor for nurserymen, landscape men and home gardeners, has put on the market a rotary tillage attachment which gives its tractors three unique features. The other two are a worm-gear drive and a full automatic clutch. The Cultiller models also are equipped with free wheeling, adjustable handles and tractor tread pneumatic tires. The tractors work on a principle of independent drive of wheels and tines.

Complete with rotary tiller attachment is the new Cultiller model C. The 3-horsepower Clinton engine affords a speed of from one to three miles per hour. The front chassis is made of cast aluminum alloy and the rear deck of sheet steel; the model weighs 187 pounds. The tilling attachment tills a normal width of sixteen inches and a depth of one to eight inches.

The Cultiller garden tractor can be used with about twenty attachments made by the Cultiller Corp., so that, in addition to its many uses for garden work, it can be used for many jobs when fitted with attachments, such as sickle bar, lawn mower, power sprayer, sulky, snow plow or lawn roller.

NEW DAYTONA FIRM.

A new nursery and landscape business, named Palmland Nursery, has been opened at 922 Volusia avenue, Daytona Beach, Fla. On a tract of land 300 feet long on Volusia avenue and 200 feet long on Caroline avenue, which has been enclosed by masonry walls and hedges, have been designed and planted various types of patios, walks, rock gardens, pools and other landscape arrangements, such as one would find on Florida home grounds. All the nursery's plants are displayed in garden settings, fulfilling the aim of the firm to display actual arrangements so the homeowner may select plants to harmonize with his own home grounds.

The firm emphasizes the importance of the outdoor living room in Florida and will specialize in "package deals," doing a complete job of designing, building and planting, selling ideas as well as plants.

J. B. Kulzer, local builder, is owner of the nursery. Walter Snead, Jr., designed the grounds and will manage the nursery, with the help of Mrs. Snead, and will have a working interest in the business.

KRIEGER'S WHOLESALE NURSERY

BRIDGMAN, MICHIGAN

Telephone 22

SMALL FRUITS

These prices cancel all previous lists and are subject to change without notice. 250 or over at 1000 rate. Boxing at cost. All prices F.O.B. Bridgman. Usual terms.

GRAPES

	Per 100	Per 1000
Concord, 2-1	\$10.00	\$80.00
Concord, 1-1	8.00	60.00
Niagara, 2-1	11.00	90.00
Niagara, 1-1	9.00	70.00
Catawba, 2-1	11.00	90.00
Catawba, 1-1	9.00	70.00
Fredonia, 2-1	11.00	90.00
Fredonia, 1-1	9.00	70.00
Delaware, 2-1	14.00	120.00
Delaware, 1-1	11.00	90.00
Van Buren, 2-1	26.00	—
Van Buren, 1-1	16.00	—
Sheridan, 1-1	14.00	—

BLACKBERRIES

	6.50	55.00
Eldorado, transplants	5.00	40.00
Eldorado, No. 1, r.c.	6.50	55.00
Alfred, transplants	5.00	40.00
Alfred, No. 1, r.c.	5.00	40.00
Early Harvest, No. 1, r.c.	5.00	40.00

BOYSENBERRIES and DEWBERRIES

Boysenberry (Common), No. 1 tips.	5.00	40.00
Boysenberry (Thornless), No. 1 tips.	5.50	45.00
Lucretia Dewberry, No. 1 tips.	5.50	40.00

CURRENTS

Wilder, 3-yr. heavy	15.00	130.00
Wilder, 2-yr. No. 1	12.00	100.00
Wilder, 1-yr. No. 1	7.00	60.00
Red Lake, 2-yr. No. 1	16.00	—
Red Lake, 1-yr. No. 1	12.00	—

GOOSEBERRIES

Downing, 2-yr. No. 1	25.00	—
Houghton, 2-yr. No. 1	25.00	—
Champion, 2-yr. No. 1	25.00	—

BLUEBERRIES

Prices of Rancocas, Rubel, Jersey	Each	Per 10	Per 100	Per 1000
2-yr., 9 to 12 ins., bearing age...	\$0.40	\$3.50	\$32.50	\$300.00
3-yr., 12 to 18 ins., bearing age...	.55	5.00	47.50	450.00
4-yr., 18 to 24 ins., bearing age...	.75	7.00	67.50	650.00

Write for Special Quotations on Quantity Lots.

GARDEN INSTITUTE MERGES.

The National Garden Institute has merged with Friends of the Land and its address is 1368 North High street, Columbus 1, Ohio. Approval of this step was given by the directors or trustees of the respective organizations in the fall. The two organizations have had an interlocking of officers and directors, as well as a considerable duplication of contributing and regular members.

The National Victory Garden Institute was organized in February, 1943, to carry out objectives proposed at that time by the United States Department of Agriculture. It was continued after the war, but further peacetime development was abandoned in favor of merger with the Ohio organization.

CORRECTION.

In the article "Modern Methods of Plant Propagation" by Richard Fillmore in the December 1 issue it was erroneously stated that "Whip grafts of apple, prunus species and many others can be callused ready for the field in ten days at 60 degrees Fahrenheit." Instead, the period for callusing should be thirty days at 60 degrees Fahrenheit.

FRUIT TREES

HARRISON BROTHERS NURSERIES

G. Hale Harrison, General Manager
BERLIN, MARYLAND

Maurice C. Ravensberg Boskoop, Holland

Reliable firm for general Nursery Stock and Belgian plants.
Catalog on application.

RASPBERRY PLANTS

RED - BLACK - PURPLE

C. H. BENEDICT
GRAND JUNCTION, MICH.

Quality Holland Bulbs

C. WESTERBEEK & SON, Inc.

Wholesale Growers and Exporters.

Sassenheim 44 Whitehall St.
Holland New York, N. Y.
Write for price list.

MALLING STOCKS

We offer Malling Stocks I, II, VII, IX, XVI and Quince A, B and C from stool beds originally supplied by East Malling Research Station. Guaranteed true-to-type and free from all disease.

Prices F.O.R.R., Liss Station, England.

Per 100 Per 1000
Firsts, 6 to 12 mm..... \$6.00 \$56.00
Seconds..... 5.50 50.00

Also all the latest English varieties of fruit trees such as:

APPLES—Winston, Sunset, Laxton's Advance, Laxton's Epicure, Laxton's Fortune, George, Neal, James, Grieve, Tydemar's Early Worcester (mostly bred from Cox Orange).

PEARS—Laxton's Superb, Improved Ferribility.

PLUMS—Early Laxton, Marjories Seedling.

All on stocks recommended by East Malling Research Station.

Prices on application.

BLACKMOOR ESTATE

The Manager, Fruit Office
LISS, HAMPSHIRE, ENGLAND

VUYK VAN NES BOSKOOP

Originators of Azalea Vuykiana.

Growers of choice Nursery Stock.

Please direct your correspondence to:

140 CEDAR STREET NEW YORK 6, N. Y.

"BRODLEAF" HOLLAND PEAT MOSS

Fully Matured—Packed Dry—Saves Freight
20 LARGE 4-bu. BAGS (2 color)..... \$29.00

20 MEDIUM 2-bu. BAGS (2 color)..... 24.00

10 Large Standard Bales, each..... 4.00

Ask for delivered carload prices on:

STANDARD BALES — EXTRA BALES — JUMBO BALES

HALF MOON MFG. & TRADING CO., Inc.

90 West Street New York 6, N. Y.



CALIFORNIA ASSOCIATION OF NURSERYMEN

ELMER J. MERZ, Executive Secretary

304 MITAU BUILDING

SACRAMENTO 14, CALIF.

CALIFORNIA ASSOCIATION IN THIRTY-NINTH YEAR.

On November 23 at the city of Los Angeles a group of nurserymen gathered in convention. Included in the attendance roster were the names of J. A. Armstrong, W. B. Clarke, Leonard Coates, D. W. Coolidge, M. L. Germain, Charles Howard, Fred Howard, William Kirkman, John Reeves, George Roeding, C. W. Small, R. M. Teague and Charles Winsel.

Many of our newer nurserymen will not recognize some of these names, but most of you will recognize them as men who are either active in the nursery business at the present time or were the founders of some of our leading nurseries.

This meeting was not a recent meeting; in fact, this convention was held in 1911, a little over thirty-eight years ago, and was the first convention of the California Association of Nurserymen.

The actual formation of the California Association of Nurserymen dated back to the year before when a group of twenty-five nurserymen met at San Jose for the express purpose of forming an association of nurserymen in California. Looking through the report of the proceedings of the early conventions I note that the man who was probably the foremost supporter of this association was George Roeding, Sr. Prior to the formation of the California Association of Nurserymen, an organization known as the Pacific Coast Association existed, and even before this, nurserymen in California were organizing. Back in 1858 a group of California nurserymen organized to adopt a scale of prices and eliminate tree peddlers and establish direct trade with planters. About twenty-five years later there was a Southern California Nurserymen's Association which functioned chiefly to recommend varieties for planting.

In 1893 a group met at San Francisco to discuss organizations and put on a one-act play in nursery organization. At this meeting a continuous association was contemplated, but not realized.

The permanent California Association of Nurserymen was undertaken at San Jose in 1911, and the first an-

nual convention was held at Los Angeles that same year.

The original group consisted of twenty-five nurseries, and the growth of the association has been continuous since then, until at the present time we have a membership that is rapidly approaching the 600 mark.

In going through later membership lists of the association it is extremely interesting to note that in 1921 the following firms, which are at present members of our association, held membership in the association at that time:

Aggeler & Musser Seed Co.
Armacost Co.
Armstrong Nurseries
Bassett & Washburn
City & Kentia Nursery

Leonard Coates Nurseries, Inc.
Coolidge Rare Plant Gardens
Cottage Gardens
East Lawn Nursery
Foothill Nurseries
Germain's
Gregory Bros.
Hallowell Seed Co.
Howard Rose Co.
Howard & Smith
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These firms were strong supporters of the California Association of Nurserymen then, and these firms still maintain membership and have been most important factors in the successful development of our present organization.

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LAWN SEED
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"Supreme" Quality
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Nation's Leading Source
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NURSERY COMPANY
Niles, California

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1-yr. Peach Trees		Each
5 ¹ / ₂ -in. and up, 6 ft. and up.....		\$0.35
11/16 to 5 ¹ / ₂ -in., 5 to 6 ft.....		.25
9/16 to 11/16 in., 4 to 5 ft.....		.20
7/16 to 11/16 in., 3 to 4 ft.....		.20
J. H. Hale	Mayflower	
Indian Cling	Elberta	
White English	Hiley	
Carman	Elberta	
Belle of Georgia	Red Bird	
Halehaven	Early Rose	
Chinese Cling	Golden Jubilee	
2-yr. Apple Trees		
1-in. 6 ft. and up.....		.40
11/16 to 1-in. 5 to 6 ft.....		.30
9/16 to 11/16 in., 4 to 5 ft.....		.25
7/16 to 9/16-in., 3 to 4 ft.....		.20
Arkansas Black	Winesap	
Early Harvest	Yellow Delicious	
Astrachan	Red Delicious	
Black Ben	M. B. Twig	
Early Transparent	Stayman	
Red June	Yates	
1-yr. Plum Trees		
5 ¹ / ₂ -in., 6 ft. and up.....		.40
11/16 to 5 ¹ / ₂ -in., 5 to 6 ft.....		.35
9/16 to 11/16 in., 4 to 5 ft.....		.25
7/16 to 9/16-in., 3 to 4 ft.....		.20
Mammoth Gold	Red June	
Damson	Burbank	
1 and 2-yr. Pear Trees		
9/16-in., 5 to 6 ft.....		.60
9/16-in., 4 to 5 ft.....		.50
7/16-in., 3 to 4 ft.....		.40
Pineapple	Kieffer	
Cherry Trees	Garber	
2 to 3 ft.....		.65
3 to 4 ft.....		.75
Montmorency	Early Richmond	
1-yr. No. 1 Grapevines		
10c each		
Niagara	Moore's Early	
Concord	Fredonia	
Weeping Willow Trees		
6 to 7 ft.....		.75
7 to 8 ft.....		.90
I have owned this nursery for 30 years, and people come back every year and want more stock. All stock is machine-dug.		

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2-yr. Concord and Niagara.

Hydrangea P.G.

Peach

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SAWYER, MICH.**SEEDS**Collectors of Tree, Shrub and
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E. C. MORAN Stanford, Mont.

It is interesting to note that back in 1911 one of the speakers on the program made this observation, "Nurserymen should be organized because this is an age of organized endeavor; the industrial world is organized; the big interests are organized, and the religious world is organized."

This observation was made thirty-eight years ago and certainly is more true today than ever before. If nurserymen thirty-eight years ago recognized the importance and the need of a strong trade association, surely that need is even greater today than it was in those days when there was so little government in business and state and federal controls were few.

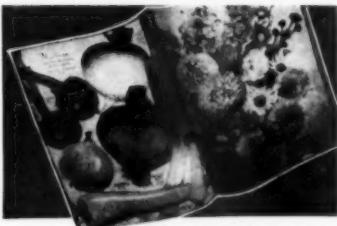
The speaker went on further to say, "What is organization? It is forming an association or group for the purpose of exercising some control of business or things. Such associations or organizations may be for good or bad. The purpose should be for the betterment of existing conditions. If for persons, then to help them to better social or material conditions. If for business and industrial matters, then to raise them to higher planes, broader and more liberal policies, economic and wise management."

In going through records of subsequent meetings of the association I note that after the second year the membership in the state association had grown to sixty-seven and that the association prospered to the extent of about twenty new members per year until the membership reached a total of 124. It appears that later the industry suffered some rather poor years and membership dropped to a point where there was some question as to whether the association could continue to operate, but by 1920 things began looking up for the organization, both in members and support for the organization financially.

That there were mutual problems similar to those which we have today in different form is evident by the subjects which were discussed at meetings from time to time, but the one fact that seems to prevail at all times is the agreement among the nurserymen of a definite need for a strong, active trade association. That these pioneer nurserymen sincerely believed this is evidenced by the fact that we have an active trade association in the nursery industry at the present time. It is my feeling that every nurseryman in business owes a debt of gratitude to the original members of the California Association of Nurserymen who met in their first annual convention at Los An-

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in HENDERSON'S 1950 FLORISTS and GROWERS CATALOG



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FINER VARIETIES - STRONGER PLANTS

New, more beautiful and bountiful flowers and vegetable strains. Varieties that bring the highest price in the markets.

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103rd year of service to Nur-
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NEW YORK 7 N. Y.**Sow Now!****HARDY PRIMROSES**

Best results are obtained when sown in flats or pans containing light, well drained soil topped with one inch of shredded sphagnum. Cover seeds with shredded sphagnum moss, water well and place where they will be exposed to freezing temperatures for several months.

Pkt. 1/4-oz. Oz.

Acaulus, finest mixed.
Brilliant mixture with flowers on single, short stems \$0.75 \$3.75 \$14.00

Auricula, fancy mixture.
Large fragrant velvety blooms50 2.25 7.50

Polyantha,
fancy mixed75 3.50 12.00

Polyantha,
blue-flowered 1.00 3.50

Our new catalog lists many more choice items. Write for it.

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Missionary

Tenn. Beauty

Tenn. Shipper

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Gem

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We will ship direct to your customers if you desire. You're welcome to come and see our fields. Let us quote you on your entire needs.



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Large berry, heavy fruiter, good quality and substance, reproduces freely. A great contribution to commercial and home garden strawberry growers.

Sold only under contract and royalty restriction for propagation for sale. A limited number of potted plants available this season.

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SMALL FRUIT PLANTS

Thirty varieties of Grapes, including the

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Currants and Berry plants

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APPLE and PEAR SEEDLINGS

2-yr. **APPLE TREES**

1-yr. **PEACH, CHERRY, PLUM**

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All grades. Write for special low prices.

L. R. TAYLOR & SONS
Phone: 25909 or 25019 **TOPEKA, KAN.**

FRUIT TREES

Apple, 1 and 2-yr., Dwarf and Standard

Pear, 1 and 2-yr., Dwarf and Standard

Plum, 1 and 2-yr.

Sweet and Sour Cherry, 1 and 2-yr.

Quince, 2-yr.

Apricot, 2-yr.

Peach, 1-yr.

Write for our wholesale list.

KELLY BROS. NURSERIES, Inc. DANSVILLE, N. Y.

WE OFFER... Our General Line of SMALL FRUIT PLANTS

Let us quote on your requirements.

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EVERBEARING STRAWBERRIES

All the newest and best varieties.

Fine, heavy-rooted, healthy plants.

Write for 1950 price list.

MEANAL BERRY NURSERY HAMILTON, MONT.

geles in 1911. You who are in business in this state today owe much to those who gave of their time and their money to consider and work on industry-wide problems. It is your obligation to continue to maintain and support a strong trade association to help solve present-day problems and maintain the strong position that the industry now holds.

Elmer J. Merz, Exec. Sec'y.

LOS ANGELES PARTY.

Approximately 300 persons attended the Christmas party of the Los Angeles chapter of the California Association of Nurserymen, held December 16 at the Rio Hondo Golf Club. Following a cocktail hour a delicious turkey dinner was served. Entertainment was provided by a master of ceremonies, a comedian and Hawaiian dancers from the Val Moore School of Dancing. The hit of the evening was Oscar Cuellar, a young man from Guatemala who is studying the culture of tropical plants at the Buena Park Greenhouses. Mr. Cuellar played the guitar and sang many Spanish songs.

Among the honored guests were the officers of the state association and their wives, who are President and Mrs. Syd Whitehorn, Vice-president and Mrs. William S. Clark, Secretary and Mrs. Elmer Merz and Treasurer and Mrs. Walter Tecklenburg.

Chapter President F. C. ("Tommy") Tomlinson thanked the committees for their splendid work in giving the party.

Robert Weidner, Sec'y.

SAN FERNANDO PARTY.

The San Fernando chapter of the California Association of Nurserymen held its Christmas dinner party December 19 at the Empire Club, San Fernando. Dancing and a floor show provided entertainment. Presents were exchanged by members and their guests. F. C. (Tommy) Tomlinson and Lynn Mossholder were guests from the Los Angeles chapter, and Mr. and Mrs. Roy Surles, from the Aggeler & Musser Seed Co., and Mr. and Mrs. Ben Slufferman, from the Gaviota Co. Jean Powell, Sec'y.

SAN JOAQUIN PARTY.

The annual Christmas party of the San Joaquin chapter of the California Association of Nurserymen was held December 15 at the Legion 509 Club, Fresno. It was a gala affair under the able chairmanship of Cliff Oliver.

Thirty-seven members, their wives and guests attended. Honored guests included the president, executive secretary and treasurer of the California Association of Nurserymen and their wives; namely, Mr. and Mrs. Syd Whitehorn, Mr. and Mrs. Elmer Merz and Mr. and Mrs. Walter Tecklenburg.

After an exceptional Christmas dinner, gifts and favors from under the tree were exchanged. A lively game of bingo followed by dancing to music on the piano and guitar entertained the group.

The next business meeting will be held January 19 at Fresno. Andy Caglia will be program chairman.

Ivan L. Stribling, Sec'y.

CALIFORNIA NOTES.

California nurserymen are proud of the announcement in a press release from the office of the American Association of Nurserymen that California now leads the nation in sales of horticultural specialties. Executive Secretary R. P. White predicted that sales for 1949 would run over \$500,000,000. California accounts for nearly \$70,000,000 of the total sales in the country, New York for about \$45,000,000, Pennsylvania for \$40,000,000 and Illinois for \$37,000,000. Los Angeles county, California, leads all the counties in the nation, having produced and sold about \$20,000,000 worth of nursery stock. Cook county, Illinois, is second, with about \$19,000,000.

Imogene Wittsche, the 14-year-old daughter of Fred Wittsche, nurseryman employed at F. Lagomarsino & Sons, Sacramento, who lost both legs below the knees as a result of being run down by a motorboat in Lake Tahoe last summer, recently was released from the hospital and will soon be fitted with artificial legs. Nurserymen in California contributed to a large fund given to her family to defray medical expenses. Phil Davis, who drove the motorboat in the accident has been convicted, but is out on bond pending an appeal of his case.

Nurserymen who are called on to make talks before amateur garden clubs may obtain sound movies on many garden subjects from the Better Gardens Institute, 593 Market street, San Francisco, without charge.

Gordon Lauder has been appointed to assist Clarence Sill as a nursery inspector.

Among the graduates in ornamental horticulture from San Mateo Junior College who recently attended a class reunion were Larry Day, Paul von Kempf, Gordon Lauder, Carl

MALONEY'S OFFER



Our 65th Year

A FINE ASSORTMENT OF
HARDY UPLAND-GROWN

FRUIT TREES

1 and 2-year

STANDARD and DWARF PEAR

STANDARD APPLE

PLUM, APRICOT, QUINCE

SWEET and SOUR CHERRY

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SHRUBS—EVERGREENS—ORNAMENTALS

Let Us Quote You Attractive Wholesale
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Write for Complete Trade List.

See our Representative, H. W. Maloney,
at the Illinois Nurserymen's Meeting.

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Superfection Everbearing Strawberries, Sept. 12, 1948.

GROW MORE BERRIES THIS NEW EASY PYRAMID GARDEN WAY

Grow Beautiful Pyramid Gardens of Moss Roses, Phloxes, Hybrid Tea Roses, etc. The practical vegetable garden.

Complete set of aluminum bands, 6-foot diameter, aluminum bolts and instructions, postpaid to your customer under your label, only \$6.40.

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Largest growers of Strawberry and Phlox plants in the middle west.
Packing out exclusively for the trade. Write us for particulars.

CERTIFIED BLUEBERRY PLANTS

1-year Rooted Cuttings, 2 and 3-year Nursery Plants,
All Varieties.

Propagated from stock taken from our own productive farms.

Guaranteed True to Name.

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GALLETTA BROTHERS'
BLUEBERRY FARMS
HAMMONTON, NEW JERSEY

ROBERTS NURSERY CO.

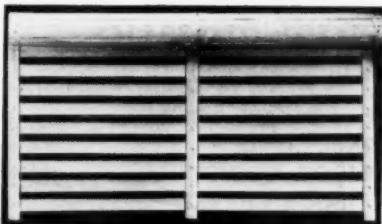
Wholesale growers of Dependable

FRUIT TREES

We solicit your list of wants.

DANSVILLE, N. Y.

New LATH IN ROLLS LIKE LAYING A CARPET



THE MOST CONVENIENT CONSTRUCTION KNOWN

Above you see a roll of 1-in. spaced Alumalath. It weighs but 30 lbs. It can be "applied like a carpet" . . . then nailed into place.

Alumalath Rolls are available in 0-in., 1-in., 1½-in. or 2-in. spacings; also special spacings.

For greenhouses, patios and porches Alumalath is the buy. With cord attachment it will roll up or down as required and affords ideal protection.

Some Territories Open for Distributors. Write or Wire.

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Simplifies Lath House Construction

5x50-ft. Alumalath Rolls may be put in place in a jiffy. With your framework up you merely unroll Alumalath and nail it in place, and immediately you have uniform shading at low cost with long-lasting Alumalath . . . the metal lath house.

Wertz, Jules Fanguard, George Powell and Dan Williver. All are in the nursery business or closely allied work.

W. B. B.

TO INTRODUCE NEW ROSE.

According to an article in the Burlingame, Calif., Advance, John R. Padilla, of Padilla Roses of California, South San Francisco, will introduce a new patented rose, called Indian Maid, in December, 1951. A hybrid tea, the new rose has long pointed buds, and the petals are salmon with reverse in bronze-yellow.

During the war Mr. Padilla served for six years in the Marine Corps and saw active duty in the Pacific theater. After his discharge he settled in northern California and selected as the site for his nursery, a hollow, protected by the elevated area of Buri Buri Village, South San Francisco. The new nursery, of modernistic design, was officially opened in August. It includes a garden supply department and does both a retail and mail-order business.

Mr. Padilla and his wife, Mildred, and their two sons, Noel, 19, and Jesse, 23, formerly lived at Van Nuys, where they were also engaged in the nursery business. His father, Juan Padilla, manages this establishment and he, too, has been in the nursery businesses since his youth.

CALIFORNIA PEACHES.

As a result of breeding work conducted last year on the Grant Merrill fruit farms, Red Bluff, Calif., two new peach varieties, Merrill Gem and Merrill Beauty, were recently introduced and patented.

Produced by crossing Red Bird and J. H. Hale and then planting the open pollinated seeds of the best of the resulting seedlings, Merrill Gem resembles Red Bird in many respects. Its season is about the same as that of Red Bird, or possibly a few days earlier. As grown in California, Merrill Gem is red almost all over and is larger. It has a yellow flesh and almost no split pits, as are common to Red Bird. The flesh is intermediate in texture between that of Red Bird and J. H. Hale, being quite crisp when first picked, even when with nearly full sugar. According to Mr. Merrill, this new variety is quite firm and so fills the needs of early shipping under California conditions.

Produced by planting a seed of J. H. Hale from a tree growing beside a peach variety test block, Merrill Beauty more nearly resembles J. H. Hale than any other peach,

THE SHERWOOD RED AZALEA

is taking the country by storm. Happy customers everywhere, and many repeat orders. The most magnificent, hardy evergreen azalea known.

Don't be caught short on this fast-selling item. Stock is moving rapidly. See our wholesale trade list for description.

Fine, budded specimen plants, 6 to 9 ins., shipped bare-root and carefully packed, \$43.00 per 100.

Also this great favorite—

SHERWOOD ORCHID AZALEA

Fine, budded specimens, 9 to 12 ins., shipped bare-root and carefully packed, \$51.00 per 100.

Order now for spring delivery. Cash only. We have many items in lining-out stock listed in our wholesale catalog available to the trade.



ALSO CHINESE PINE

Fine B&B Specimen Trees	Each	per 100
18 to 24 ins., B&B		\$0.81
24 to 30 ins., B&B		1.22
30 to 36 ins., B&B		1.54

F.O.B. Portland Ore.
Order today.

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EVERGREENS—Propagators & Growers

Wholesale Only

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ROSES

During the year, watch the
pages of the American
Nurseryman for your best
bet in Bare-root Roses—

WEEKS "California-grown, Quality Known"

WEEKS WHOLESALE ROSE GROWER

O. L. WEEKS

R. F. D. 3, Box 323

SANTA ANA, CALIF.



though the tree which developed from the J. H. Hale seed appears to be a cross between J. H. Hale and Arp because the fruit and many of the seedlings resemble Arp. The best seedling to develop from the original tree was named Merrill Beauty. It ripened commercially at Red Bluff last year forty-six days ahead of Elberta and was picked commercially thirteen days ahead of Redhaven. Probably because of the cool nights, it takes longer for a variety to mature in California than in eastern states.

Although highly colored, the Merrill Beauty does not have so much color as the Merrill Gem, being about half covered with a red blush. When soft ripe the fruit is completely free-stone, but when firm ripe it clings to the pit somewhat. When the fruit is quite green a relatively high sugar content is developed; so it can be picked when green to ripen into a good peach, which should make it valuable for eastern shipment.

NACCONOL AS DEFOLIANT FOR NURSERY STOCK.

Report from the Oregon agricultural experiment station is that Nacconol (NR, HG and NRSF) sprays in proper concentration with a summer oil appear to bring about satisfactory defoliation of rose plants in the field prior to digging and storage. They have been equally effective on apple seedlings. A copper sulphate talc dust, while effective in defoliating some varieties, is not generally so satisfactory and safe as the Nacconol sprays, states A. N. Roberts, of the department of agriculture.

The effectiveness of a defoliation spray depends on a number of factors, including the variety in question, its age and maturity, the weather conditions, the kind and concentration of the defoliant applied and the time and method of its application. Whether or not the plant will be injured by such treatment also is determined by these factors.

Some species and varieties of roses are satisfactorily defoliated by a spray composed of two per cent Nacconol NR plus three per cent summer oil in ten days to two weeks' time, states the report. With other varieties, however, a concentration of three or four per cent Nacconol NR plus the summer oil is required for complete defoliation. Still other varieties are not completely defoliated with any of the sprays used. Whether they would respond to still higher concentrations remains to be seen. It appears that some of these difficult varieties are naturally slow in developing abscission layers and, if given



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	EACH
Bouvardia Albatross	15c
Chamaecyparis Law. Ellwoodi	15c
Erica melanthera rosea	15c
Eucalyptus rudis	10c
Euonymus aureo-marginatus	12c
Hedera canariensis variegata	12c
Hydrangea White	15c
Ilex cornuta	15c
Myrtus communis variegata	15c
Pinus halepensis	12c
Pyracantha gruberi	15c
Pyracantha lalandi	12c
Sequoia sempervirens	15c
Viburnum robustum	12c

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343 So. Dearborn St.

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OREGON'S BEST SOURCE OF GOOD ROSES

A complete list of HYBRID TEAS, CLIMBERS, BABIES and FLORIBUNDAS. Also, one of the most complete lists of patent varieties, including the A.A. R. S. award winners.

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FOR 1950 SEASON

Fruit Trees
Small Fruits
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Flowering Trees
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Roses

and a general assortment of other nursery stock.

Ask us to put your name on our mailing list. (Use your letterhead.)

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Hillsboro, Oregon

CHINESE ELM SEEDLINGS

	Per 100	Per 1000
12 to 18 ins....	\$2.50	\$15.00
18 to 24 ins....	3.50	20.00
2 to 3 ft.....	5.00	30.00
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Send for prices on pear seedlings, Bartlett Pear trees, etc.

WASHINGTON NURSERIES
TOPPENISH, WASH.

ROSES

2-yr., on multiflora, in all the most popular standard sellers. Also some on manetti for greenhouse use. Rooted multiflora for fence rows. Send for list.

Art Suhr, prop.

MT. HOOD NURSERY GRESHAM, OREGON

sufficient time, will show considerable response.

Older plants of a given variety mature their foliage earlier in the fall and for this reason are more responsive to defoliant sprays. Rose plants of any age, as they approach maturity, become progressively easier to defoliate with a given concentration of the defoliant material.

Comparable concentrations of Nacconol HG and NRSF seem to be equally effective as the NR form, but are not so easy to use. The relative cost and efficiency of these various forms need to be determined. A ten per cent copper sulphate talc dust, while an effective defoliant for some varieties of roses, does not appear to be so effective as the Nacconol sprays.

The time of application and weather conditions are important factors in determining the effectiveness of these defoliant sprays. The earlier the application is made in the fall, the less mature the rose plant is, and the higher the concentration of the spray must be to obtain satisfactory results. Defoliation obtained by this means is ordinarily at the expense of adequate plant maturity. Temperature and moisture conditions following application, however, are important factors in determining the effectiveness of the defoliant spray. Ordinarily the higher temperatures that prevail at the time of an early application will tend to increase the killing power of the spray, but, if the plant is not sufficiently mature, more complete defoliation will not necessarily follow. It may be necessary to use a higher concentration with late spraying if the weather has become colder.

The presence of excessive moisture during or immediately following application of the spray will reduce the effectiveness of the defoliant. However, after the spray has had a chance to penetrate and kill the leaf tissue, the presence of ample moisture in the atmosphere seems conducive to more rapid abscission of the injured leaf. A certain amount of moisture on the foliage is necessary when using a copper sulphate dust, but a rain too soon after its application will reduce its effectiveness. The Nacconol sprays are best applied when the foliage is fairly dry.

Further investigations are necessary before Nacconol sprays can be recommended generally as defoliants for roses and other nursery stock, but they are the most promising of the spray materials tested thus far for this purpose, states the report. At the concentrations used in these tests, they have been extremely effective and have not resulted in chemical in-

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field & container grown orientals



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RESISTANT ROOTSTALKS, FEATURING
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RESISTANT PEACH ROOTSTALK.

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\$5.00, postpaid
American Nurseryman, 343 S. Dearborn St., Chicago 4, Ill.

jury to the plant. However, too early defoliation has resulted in insufficient storage for carbohydrates in the canes and roots of the plants for satisfactory storage. Plants at the Oregon agricultural experiment station, Corvallis, defoliated before November 1, 1948, suffered severe winter damage in the field. Plants defoliated on October 15, 1948, in the Portland area, and held in storage, came through in good condition. The maintenance of a functional leaf surface on nursery stock as long as possible during the fall months has a direct bearing on the winter hardiness and storage quality of the stock. Sometimes a week or two will make the difference between well matured and poorly ripened nursery stock.

GIVES GARDEN TO NATION.

Lord Aberconway, president of the Royal Horticultural Society, recently donated the major part of his remarkable 50-acre garden at Bodnant, North Wales, to the National Trust, an organization which, with the co-operation of the R. H. S., seeks to save some of the finest British gardens, the upkeep of which has been made impossible for their private owners by mounting costs in the face of decreasing income due to heavy taxation.

Bodnant contains one of the finest collections of plants in Great Britain. It is well known to the local public and tourists, because Lord Aberconway was accustomed to throw his garden open twice a week for the benefit of hospital funds.

With the garden he has donated an endowment fund to the National Trust in order that, with visitors' fees, the garden may be supported without becoming a burden to the trust.

His action is praised in English horticultural circles, because it will save Bodnant from suffering the fate of other fine gardens in that country which have either fallen into neglect or given way to building subdivisions.

Lord Aberconway is known on this side of the ocean not only for his service to horticulture and his long prominence in the Royal Horticultural Society, but also through his visits to this country.

FORMERLY Landscape superintendent of Capital Nursery Co., Sacramento, Calif., George C. Dobbins has opened Arden Town Nursery in the Arden Town suburban community near Sacramento. The nursery is surrounded by other shops.

PORTLAND WHOLESALE NURSERY CO.

306 S. E. 12th AVENUE Avery H. Steinmetz PORTLAND 14, OREGON
Paul E. Van Allen

Quality Stock

CONIFERS AND BROAD-LEAVED EVERGREENS
SHADE AND FLOWERING TREES
FRUIT TREE SEEDLINGS
FRUIT TREES
DECIDUOUS SHRUBS
VINES AND BULBS
PORTLAND ROSES
NURSERY SUPPLIES

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FAIRVIEW, OREGON

Wholesale only

CONSTANT VIGILANCE RESULTS IN QUALITY STOCK

Fruit Tree Seedlings
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Shade Trees

Combination carloads to Eastern
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Wholesale Growers of General Nursery Stock

FRUIT and NUT TREES

Grown and Selected especially for the retail
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CARLTON NURSERY CO.
"Over Half a Century" — Since 1890
Forest Grove, Oregon

ROSES—TREE ROSES

Reservations made for 1950 season.
Good varieties—excellent quality. Write
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FRUIT TREE SEEDLINGS

Northwest-grown

Apple and Pear

Branched and Straight Roots

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Root-pruned Branched Roots

Our Quotations Gladly Given.

Combination carlots available
to Eastern distribution January to
March.

EVERGREEN LINERS

Azaleas, Conifers, Heathers, etc.
Available in rooted cuttings and field
transplants grown in sandy soil.

Write for descriptive, illustrated
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Wholesale Propagators and Growers of
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ROSES

Two-year-old, field-grown plants.
Send for wholesale list.

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CLASSIFIED ADS

Rate: 25 cents per line, each insertion.

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AZALEAS

AZALEAS.

Thousands of beautiful, well budded, excellent color, field-grown Coral Bells and Hinodegirl. Easy trucking distance to New York and other eastern points. We will ship anywhere. Satisfied customers in 12 states. Each Each

per 1000
6 to 8 ins. \$0.70 \$0.65
8 to 10 ins. .90 .85

10 to 12 ins. 1.15 1.00
Packing additional. Burlapping, 10c each extra, 25c at 1000 rate. Order today while they last, and send for list of other stock.

TANKARD NURSERIES

Exmore, Va.

75,000 AZALEA TRANSPLANTS. Indica alba, Mary, Hinodegirl, Alice, Amoena, Hinomayo, Flame, Purple King, mixed pink kaempferi.

Very heavy, rooted. 12½c each in 1000 lots; 15c each in 100 lots. Packing and shipping extra.

DEKALB NURSERIES, Inc.

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AZALEA TRANSPLANTS. 3 to 5 ins. well branched, Hinodegirl, Pink Pearl, Hinomayo, Snow, Ledifolia alba, Magnifica, Coral Bells, Amoena and choice mixed. Ready in May, \$13.00 per 100. Packing free. Cash with order.

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AZALEA TRANSPLANTS, Spring Delivery JOHN WIGMORE, Norman Ave., Riverside, N. J.

BERRY PLANTS

RASPBERRY PLANTS.

BLACK, No. 1 Tips. Cumberland Logan

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Transplants on Cumberland.

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Transplants on Sodus.

RED, ¼-in. cal. Transplants. Indian Summer Taylor Latham

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Complete list of grapevines, currants and blackberries. Write for lowest wholesale prices on your requirements. A portion of the above is in storage ready for immediate shipment, and a portion will be Spring-dug in late March.

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PIXWELL and SCHWAB GOOSEBERRIES. LATHAM and CHIEF RASPBERRIES.

Pixwell Gooseberries, leading variety, 2-yr. heavy, \$25.00 per 100; 2-yr. light, \$15.00 per 100. Schwab Gooseberries, new seedling (world's largest Gooseberry), berries often 1½ ins. in diameter, highest quality, hardy, very productive, 1-yr., heavy, \$6.50 per 10; 1-yr., light, \$5.50 per 10; bearing size, \$1.00 each. All Raspberries, No. 1, heavy, \$40.00 per 1000. 10 per cent discount for cash on all stock. All plants that die, replaced at ½ price.

SCHWAB FRUIT FARM & NURSERY 220 N. Fifth St. Mankato, Minn.

GERM EVERBEARING STRAWBERRY PLANTS.

Streamliner, Minn. 1166 and Brune's Marvel. Guaranteed true-to-name and free from mixed varieties. Choice northern-grown plants. Booking orders for spring delivery. 10 per cent discount on orders of \$50.00 or more. Gem, \$10.00 per 1000.

Latham and Newburgh Raspberry plants, \$30.00 per 1000.

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Latham Red No. 1 suckers. Per 1000

1-yr. transplants .30.00

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No. 2 suckers. 18.00

Cumberland, Logan, Morrison

Black tips .30.00

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STRAWBERRY PLANTS.

Northern-grown; doubly inspected.

Gem Everbearing .12.00

Premier 11.00

ROBERTS STRAWBERRY NURSERY

Rt. 6 Kalamazoo, Mich.

BLUEBERRY PLANTS.

Cultivated, improved hybrids.

Information, varieties and prices gladly sent on request.

HARTMANN'S PLANTATION

Grand Junction, Mich.

RASPBERRIES, No. 1 Morrison tips, \$30.00 per 1000.

VICTORIA RHUBARB, 1 to 1½ ins., \$30.00 per 1000; ½ to 1-in., \$20.00 per 1000; ½ to 3-in., \$15.00 per 1000.

Can ship rhubarb any time; tips early spring.

ASHCRAFT NURSERY Copemish, Mich.

STRAWBERRY PLANTS — Northern-grown, spring-dug, Dunlap, \$8.00 per 1000; Robinson, \$9.00 per 1000; Premier, Fairfax, Catskill, \$11.00 per 1000; Everbearing Streamliner, \$15.00 per 1000; Gem, \$12.00 per 1000 and Minn. 1166, \$14.00 per 1000. Order early. PERCY'S STRAWBERRY NURSERY, Kalamazoo, Mich.

STRAWBERRY PLANTS — All leading everbearing varieties. Northern-grown, No. 1 plants; Gem, Streamliner, Minnesota, 1166, Utah Centennial, New Progressive, Superfection, Twentieth Century and Brunes' Marvel. Write for wholesale price list.

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TUBEROUS BEGONIAS — Antonelli prize-winning hybrids. Outstanding size and colors, 5c and up. GIANT GOLD CALLAS. Spectacular pot plants, easily grown, 10c and up. GLOXIA, delphinium, and primrose hybrids. HYPER-H'MINT. The fertilized, cultivated peat for Cloverset may be shipped in bags and bag sales, \$10.00 per ton plus freight, 25-ton care. Fine profit and customer satisfaction. Complete price lists from HELEN YEARSLEY, Tranquill Gardens, 14301 Telegraph Road, Detroit, 23, Mich. Will be at Michigan, Ohio and Illinois meetings.

PLANTING STOCK.
CALA REHMANNI SUPERBA.
Pink Calla.

Per 100 Per 1000
½ to 1-in. \$5.00 \$45.00
1 to 1½-in. 6.00 55.00

ANTONELLI BROTHERS Wholesale Growers
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REGAL LILIES.
Quality stock; P.O.B. Portland.

Per 100
4 to 5 ins. \$4.00; \$27.00 per case of 750
5 to 6 ins. 5.50; \$25.00 per case of 500
6 to 7 ins. 6.50; \$22.00 per case of 350

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HARDY NORTHERN-GROWN LILY BULBS. New, rare, scarce and unusual as well as standard varieties.

New wholesale list now ready.

Send for your free copy.

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50,000 DAHLIA ROOTS. We grow many acres of standard cut flower varieties for the trade. Write today for wholesale price list.

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SPECIAL SALE TO MAKE MORE ROOM.
Alba Plena, Anna Frost, Brilliant, Brooklyana, Caleb Cope, Cameo Pink, Chandelier, Elegans, Cliviana, Countess of Orkney, Dark Cheerful, Dixie, Elizabeth, Glore de Nantes, Hermene, Jarvis Red, Odome, Pink Perfection, Prof. Sargent, Sarah Frost. Rooted cuttings, 12½c; 6 to 8 ins., 17½c; 8 to 12 ins., 25c; 12 to 18 ins., 35c.

Adolph Audusson, Alba Superba, C. M. Hovey, Daikagura, Duchess of Sutherland, Eleanor Haygood, Ethington White, Firebrand, Gigantea, Glen 40, Imura, Katsukawa, Lady Clive, Laurel Leaf, Nagasaki, Pink Ball, Purple Dawn, Snow Drift, Sweetiana, Vera, Woodville Red. Rooted cuttings, 25c; 6 to 8 ins., 35c; 8 to 12 ins., 45c; 12 to 18 ins., 65c.

Above priced each. Minimum order 10 of a kind. Remittance with order. Satisfaction guaranteed or return for refund. Minimum order, \$10.00.

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Dept. A Biloxi, Miss.

CAMELLIAS — Rooted cuttings in standard and rare varieties. Pink Perfection, etc., in liners. Write for price list.

SIMSON FLORAL GARDENS Semmes, Ala.

EVERGREENS

JUNIPERS.

ADMIRABILIS. rich blue-green prostate type, very little winter discoloration.

Per 100

6 to 9 ins. T. 18.00
12 to 15 ins. TT, 2-yr., field-grown. 45.00

ANPORA. grafts, 2½-in. pots. 18.00
12 to 15 ins. T. 18.00
12 to 15 ins. TT, 2-yr., field-grown. 175.00

CANAERTI. grafts, 2½-in. pots. 50.00
18 to 24 ins. TT, 2-yr., field-grown. 150.00
24 to 30 ins. TT, 2-yr., field-grown. 175.00

DUNDEE. grafts, 2½-in. pots. 50.00
18 to 24 ins. TT, 2-yr., field-grown. 150.00
24 to 30 ins. TT, 2-yr., field-grown. 175.00

GLACIA. grafts, 2½-in. pots. 50.00
18 to 24 ins. TT, 2-yr., field-grown. 150.00
24 to 30 ins. TT, 2-yr., field-grown. 175.00

GLOBOSEA, GREEN. grafts, 2½-in. pots. 50.00
12 to 15 ins. TT, 2-yr., field-grown. 150.00

HETZL. Silver Pfitzer. 28.00

6 to 9 ins. T. 20.00

HILLTOP. grafts, 2½-in. pots. 50.00
24 to 30 ins. TT, 2-yr., field-grown. 175.00

KETTERER. grafts, 2½-in. pots. 50.00

MOFFETT'S. grafts, 2½-in. pots. 50.00

PATHFINDER. grafts, 2½-in. pots. 50.00

PFITZER. grafts, 2½-in. pots. 50.00

6 to 9 ins. T. 20.00

PFITZER, GOLDEN. 22.00

RYAN'S GREEN SCOPE. grafts, 2½-in. pots. 50.00

SARAS. grafts, 2½-in. pots. 50.00
6 to 9 ins. T. 20.00

12 to 15 ins. TT, 2-yr., field-grown. 45.00

STUHR'S SILVER. grafts, 2½-in. pots. 50.00

VIRGINIANA, HILLBUSH. grafts, 2½-in. pots. 50.00

15 to 18 ins. TT, 2-yr., field-grown. 150.00

WELCH'S. grafts, 2½-in. pots. 50.00
18 to 24 ins. TT, field-grown. 150.00
24 to 30 ins. TT, field-grown. 175.00

YORK'S BLUE SCOPE. grafts, 2½-in. pots. 50.00
18 to 24 ins. TT, field-grown. 150.00
24 to 30 ins. TT, field-grown. 175.00

All Juniper grafts on Virginia understock.

BLUE SPRUCE.

KOSTER AND MOERHEIM on Black Hills stock. 3-in. pots. 100.00

C.O.D. shipments must be accompanied by 25 per cent cash. Quantity discount—16 per cent on 1000 lots.

Our 2-year, twice transplanted grafts are grown in spaced nursery rows. All our lining-out evergreens are dug bare root, potted and packed in moss. Packing and boxing at cost.

NEBRASKA NURSERIES, Inc. Lincoln 8, Neb.

EXTRA-HEAVY, FIELD-GROWN.

Per 100

Thuya woodwardi, 10 to 12 ins. \$28.00

Thuya woodwardi, 8 to 10 ins. 25.00

Taxus cuspidata, 12 to 15 ins. 30.00

Taxus cuspidata, 9 to 12 ins. 25.00

Juniperus, Andorra, 12 to 15 ins. 28.00

Juniperus, Andorra, 9 to 12 ins. 25.00

Taxus cuspidata, 12 to 15 ins. 32.00

Taxus cuspidata, 9 to 15 ins. 27.00

Taxus hicksii, 12 to 15 ins., 3-in. pots. 32.00

Taxus hicksii, 9 to 12 ins., 3-in. pots. 25.00

Lombardy Poplar, 2 to 6 ft., whips. 7.00

Lombardy Poplar, 2 to 6 ft., br. 15.00

RIVERSIDE WHOLESALE NURSERY

JUNIPER GRAFTS.

Juniperus canarii, glauca, burkii, keteleeri, Dundee, hetzii, mascula, smithii, pfitzeriana, all on virginiana understock. Spring delivery.

Terms: Cash with order earns free packing or one-fourth cash, packing at cost and balance at shipping time. Price: \$40.00 per 100; \$37.50 per 100 at thousand rate. 250 take 100 rate. Order before June 1st, 1941, for delivery later.

Shortage of good understock and good scions means grafts will be in short supply again this year. A hint to the wise is sufficient.

T. C. CRUME NURSERY & LANDSCAPING CO.

Florence, Ky.

LINING-OUT STOCK.

Seedlings		Per 100 Per 1000
<i>Fagus sylvatica</i> , 8 to 10 ins.	8.50	\$75.00
<i>Fagus sylvatica purpurea</i> , 8 to 10 ins.	15.00	
<i>Juniperus virginiana</i> , 2 to 4 ins.	5.00	40.00
<i>Laribnum anagyroides</i> , 4 to 8 ins.	3.50	30.00
<i>Magnolia glauca</i> , 2 to 4 ins.	4.00	35.00
<i>Pinus mugo</i> , 4 to 6 ins.	5.00	40.00
<i>Pinus mugo</i> , 6 to 8 ins.	7.50	60.00
<i>Pinus nigra austriaca</i> , 4 to 6 ins.	6.00	50.00
<i>Pinus strobus</i> , 4 to 6 ins.	4.00	35.00
<i>Pinus sylvestris</i> , 4 to 6 ins.	4.00	35.00
<i>Thuja occidentalis</i> , 4 to 6 ins.	4.50	40.00
<i>Thuja occidentalis</i> (understocks), 8 to 10 ins. tr.	7.50	60.00
<i>Tsuga canadensis</i> , 8 to 8 ins. tr.	12.00	100.00
Twice transplanted cuttings from beds		
	Per 10 Per 1000	
<i>Juniperus communis hibernica</i>	\$2.25	\$20.00
<i>Juniperus communis</i>		
<i>suecica</i> <i>nana</i>	2.25	20.00
<i>Taxus media</i> , spreading	2.75	25.00
<i>Taxus media</i> , hatfieldi	2.75	25.00
<i>Taxus media</i> , hicksii	2.75	25.00
<i>Taxus media</i> Moon's columnaris	2.75	25.00
<i>Taxus media</i> , wata	2.75	25.00
<i>Taxus media</i> Vermeulen	2.75	25.00
Well established cuttings from 2 1/4-in. pots		
	Per 10 Per 1000	
<i>Andromeda japonica</i>	\$1.75	\$15.00
<i>Euonymus carrierei</i>	1.75	15.00
<i>Ilex crenata</i> bullata	1.75	15.00
<i>Ilex crenata</i> helleri	1.75	15.00
<i>Juniperus communis hibernica</i>	1.75	15.00
<i>Juniperus communis</i>		
<i>suecica</i> <i>nana</i>	1.75	15.00
<i>Juniperus depressa</i> plumosa	1.75	15.00
<i>Juniperus excelsa</i> stricta	1.75	15.00
<i>Juniperus glauca</i> hetzii	1.75	15.00
<i>Juniperus horizontalis</i>		
<i>Glauca</i> wiltonii	1.75	15.00
<i>Juniperus pfitzeriana</i>	2.25	20.00
<i>Taxus baccata</i> repandens	1.75	15.00
<i>Taxus cuspidata</i>	1.75	15.00
<i>Taxus cuspidata</i> <i>nana</i>	1.75	15.00
<i>Taxus media</i> brownii	1.75	15.00
<i>Taxus media</i> henryi	1.75	15.00
<i>Taxus media</i> Moon's columnaris	1.75	15.00
<i>Taxus media</i> wata	1.75	15.00
<i>Taxus media</i> Vermeulenii	1.75	15.00
<i>Thuya occidentalis</i> globosa	1.75	15.00
<i>Thuya occidentalis</i> globosa	1.75	15.00
<i>Thuya occidentalis</i> novum	1.75	15.00

LINERS.

Spring Delivery

	Each
<i>Azalea Mollis</i> , cream, branched, XX,	
6 to 9 ins. fd.	\$0.25
<i>Camellia</i> , Herme, 2 1/2-in. pot	25
<i>Camellia</i> , Cheerful, 2 1/2-in. pot	25
<i>Daphne</i>	
<i>Odora</i> , X	15
<i>Cneorum</i> , X	12
<i>Heather</i>	
<i>Bruckenthalia</i> , XX, 2 to 4 ins. frame	
<i>Med. White</i> , XX, 2 to 4 ins. frame	17
<i>Mrs. Hawkes</i> , XX, 2 to 4 ins. frame	17
<i>St. Kavvarens</i> , XX, 2 to 4 ins. frame	17
<i>Carnes</i> , X, flat	12
<i>Mediterranean</i> Hybrid, X, flat	10
<i>King George</i> , X, flat	12
<i>Springwood White</i> , X, flat	12
<i>Thuya woodwardi</i> , X, frame	12
<i>VeVilla</i> , X, flat	12
<i>Thuya woodwardi</i> , X, frame	17
<i>Viburnum</i> burkwoodi, X, frame	17
<i>Viburnum</i> burkwoodi, X, 6 to 6 ins.	15
<i>Viburnum</i> burkwoodi, X, 6 to 8 ins.	17
<i>Lithospermum</i> (Heavenly Blue) X, pots	12
F.O.B. Nursery, packed free, C.O.D.	
FOUR STAR NURSERY	
Hi-way 99 at No. 12th	
Rt. 3, Box 3529	Edmonds, Wash.

LINERS WITH QUALITY.

The plants listed below are grown in 2 1/2-in. rather than 2 1/4-inch pots. They have been growing in the pot plenty long to have a nice root growth and make transplanting most successful. These are outdoor bed-grown plants ready for sale.

	Each
2000 <i>Arborvitae</i> Blue Spire	\$0.17
9000 <i>Burford Holly</i>	18
5000 <i>Irish Juniper</i>	15
2000 <i>Kiyonoi Juniper</i>	15
500 <i>Vase-shaped Juniper</i>	12
2000 <i>Lotropetalum</i>	15
2000 <i>Mahonia bealei</i>	15
2000 <i>Jasminum primulifolium</i> (not potted)	.08
1000 <i>Euonymus radicans</i> (not potted)	.06
5000 <i>Mimosa</i> (not potted)	.05

VERHALEN NURSERY CO.

Scottsville, Texas

YOUR PROFITS GROW IN VERHALEN PLANTS.

TAXUS, LARGE LINERS.

FIELD-GROWN TRANSPLANTS.

From selected cuttings, heat strain.

	Per 100 Per 1000
12 to 18 ins.	\$60.00 \$550.00
18 to 24 ins.	70.00 650.00

Also B&B Taxus, upright and spreading, in landscape sizes for Middle West shipment in carload lots.

BULK'S NURSERIES, Inc., Babylon, L.I., N.Y.

LINING-OUT STOCK.

Seedlings

Per 100 Per 1000

	Per 100 Per 1000
<i>Fagus sylvatica</i> , 8 to 10 ins.	\$8.50 \$75.00
<i>Fagus sylvatica purpurea</i> , 8 to 10 ins.	15.00

	Per 100 Per 1000
<i>Juniperus virginiana</i> , 2 to 4 ins.	5.00

	Per 100 Per 1000
<i>Laribnum anagyroides</i> , 4 to 8 ins.	3.50

	Per 100 Per 1000
<i>Magnolia glauca</i> , 2 to 4 ins.	4.00

	Per 100 Per 1000
<i>Pinus mugo</i> , 4 to 6 ins.	5.00

	Per 100 Per 1000
<i>Pinus mugo</i> , 6 to 8 ins.	7.50

	Per 100 Per 1000
<i>Pinus nigra austriaca</i> , 4 to 6 ins.	6.00

	Per 100 Per 1000
<i>Pinus strobus</i> , 4 to 6 ins.	4.00

	Per 100 Per 1000
<i>Pinus sylvestris</i> , 4 to 6 ins.	4.00

	Per 100 Per 1000
<i>Pinus sylvestris</i> (understocks), 8 to 10 ins. tr.	5.00

	Per 100 Per 1000
<i>Tsuga canadensis</i> , 8 to 8 ins. tr.	12.00

	Per 100 Per 1000
Twice transplanted cuttings from beds	

	Per 100 Per 1000
Well established cuttings from 2 1/4-in. pots	

	Per 100 Per 1000
Well established cuttings from 2 1/4-in. pots	

	Per 100 Per 1000
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Well established cuttings from 2 1/4-in. pots	

	Per 100 Per 1000
Well established cuttings from 2 1/4-in. pots	

	Per 100 Per 1000

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FRUIT TREES—Continued

PECAN TREES.
Pecan trees grown on our better rootstocks. Carefully hand-dug, stake-trained trees. Sure to please.

Each	Per 100
2 to 3 ft.	\$1.10
3 to 4 ft.	1.20
4 to 5 ft.	1.40
Variegated, Kett and Sibley, in 2 to 3-ft. and 3 to 4-ft. sizes only. Leyhan and Schley, all sizes. Prices, F.O.B., Goldthwaite, Tex. Write for complete list of new low prices on fruit and pecan trees.	1.30

COCKRELL'S RIVERSIDE NURSERY
Goldthwaite, Texas

AN OPPORTUNITY in Tane-Nashi Persimmons! Mention American Nurseryman in your order and get 1000-rate price on order of 50 and up. Our top-quality trees.

Per 100 Per 1000
2 to 3 ft. \$55.00
3 to 4 ft. 70.00
4 to 5 ft. 90.00

Cash from new customers, please.

GLEN SAINT MARY NURSERIES CO.
Glen Saint Mary, Fla.

PECANS.
Stuart, Mahaha, Success, Moneymaker, More, Burkett, Schley, Western Schley and other popular and profitable catalog items. Thomas Black and Wilson, Wonder English Walnuts, Eureka and Tanenash Persimmons, Everbearing Fig Trees. Write for advance trade list.

ARP NURSERY CO.
Box 867 Tyler, Texas

APPLE TREES. Each

3-yr. good calliper.	Each per 100
3 to 4 ft.	\$0.20
4 to 5 ft. ....	.25
5 to 6 ft. ....	.35
Red Delicious, Yellow Delicious, Jonathan, Yellow Transparent, Stayman. ....	.30

BENTON COUNTY NURSERY CO., Inc.
Rogers, Ark.

GROUND COVERS

EUONYMUS RADicans VEGETUS. Per 100 Per 1000

Strong rooted cuttings.	\$8.00	\$75.00
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PLANE-VIEW NURSERY
Newport, R. I.

HARDWOOD CUTTINGS

HARDWOOD CUTTINGS.
From Hardy Northern-grown Shrubs and Trees. Delivery now. From our own plantings and blocks checked yearly for accuracy. Cut 7 inches.

Per 1000
Aronia melanocarpa \$4.00
Cornus paniculata 4.00
sibirica 4.00
(yellow bark) 4.00
Forsythia intermedia spectabilis 3.00
Elder, Golden 6.00
Cutleaf 4.00
Red-berried 5.00
canadensis 3.00
Hydrangea P.G. 5.00
Hydrangea A.G. 5.00
Privet, Amur. 3.00
Regel (true) 3.00
Ibota 3.00
Honeysuckle, morrowi 3.00
albida 3.00
bella rosea 3.00
tat roses 3.00
korolkowi 4.00
zabell 5.00
syringantha 5.00
maackii 4.00
Dierville trifida 4.00
Philadelphia grandiflora 3.00
Mt. Blanc 3.00
Bouquet Blanc 3.00
lemoinei 3.00
Physocarpus opul. aureus 3.00
Physocarpus opul. nanus 3.00
Sorbaria sorbifolia 3.00
Spiraea billardi 3.00
froebergi 3.00
thunbergii 3.00
vanhouttei 3.00
trichocarpa 3.00
Snowberry, White 3.00
Lilac, rothomagensis 5.00
Viburnum dentatum 4.00
Poplar, Lombardy 3.00
Willow, Nobs 3.00
Wisconsin 3.00
Golden 3.00
Pussy 3.00
Packed free. Cash with order, please. Delivery in good order guaranteed.

THE SCOTCH GROVE NURSERY
Scotch Grove, Iowa

KOLKWITZIA CUTTINGS—Beautybush, new wood, 6 ins. long, 500, \$6.00; 1000, \$10.00. Express charges collect. Cash with order.

ANDREW'S NURSERY, Inc. Box 442, Chapel Hill, N. C.

PFITZER JUNIPER CUTTINGS.
6 to 10 ins. long, not trimmed. Well packed, \$10.00 per 1000. Cash with order.

KRONE'S FLOWER SHOP
4221 Grand Ave., Fort Smith, Ark.

1-YR. HARDWOOD CUTTINGS

Per 100

300 Ampelopsis quinquefolia, 6 to 18 ins.	\$4.00
300 Ampelopsis engelmanni, 6 to 18 ins.	4.00
100 Cornus amomum, 12 to 18 ins.	4.00
100 Cornus stolonifera, 12 to 18 ins.	4.00
2100 Lonicera tatarica rosea, 12 to 18 ins.	5.00
200 Lonicera xylosteum, 12 to 18 ins.	5.00
100 Philadelphus coronarius, 12 to 18 ins.	4.00
200 Philadelphus grand., 12 to 18 ins.	4.00
100 Philadelphus L. Albatre, 12 to 24 ins.	4.00
100 Philadelphus L. Glacier, 12 to 24 ins.	4.00
100 Philadelphus Bouquet Blanc, 12 to 24 ins.	4.00
100 Rosa multiflora, 2 to 3 ft.	4.00
200 Syringa persica, 12 to 15 ins.	10.00
110 Salix caprea, 2 to 4 ft.	4.00
90 Salix caprea, 4 to 6 ft.	6.00
80 Salix vitellina, 4 to 6 ft.	6.00
1000 rate, 1/4 each less.	
ADAMS NURSERY, Inc.	
P. O. Westfield, Mass.	

GENUINE AMUR RIVER NORTH PRIVATE CUTTINGS—from proven "Mother Blocks" all hand-sorted, same grade as we use, so must be correct. 5,000 for \$11.25. Cash, packing free.

ALTA VISTA NURSERIES, Davenport, Iowa

HARDY PLANTS

HARDY PERENNIALS.

Strong, rooted divisions, early spring shipment.

300 at 1000 rate.	Per 100	Per 1000
Anthemis Moonlight	\$8.00	\$75.00
Hardy Aster		
Beechwood Challenger, bright red	6.00	50.00
Mt. Everest, good white	6.00	50.00
Sunset Pink, lavender-pink	6.00	50.00
Helenium Gartense , golden yellow	8.00	75.00
Polemonium Blue Pearl	8.00	75.00
Lychins viscaria floreplo	8.00	75.00
Chrysanthemum		
Aiglonique, early dbl. yellow	6.00	50.00
Autumn Lights, copper-bronze	6.00	50.00
Little Goblin, bronze pompon	6.00	50.00
Ruby Pompon, good red pompon	6.00	50.00
Little Goblin, bronze pompon	6.00	50.00
PLANE VIEW NURSERY Newport, R. I.		

POLEMONIUM BLUE PEARL.
Strong, 1-yr. field grown, for early spring shipment. 300 at 1000 rate.

A very fine hardy perennial, sun or shade. Blue flowers on 15-in. stems, May and June. When finished blooming, this Polemonium resolves itself into a 6-in. tuft of dark green, fernlike foliage that gives sales appeal even when not in bloom.

PLANE VIEW NURSERY Newport, R. I.

PERENNIALS.
New and Standard Kinds. A most modern and complete selection.

New Wholesale List now ready.

Send for your Free Copy Now.

CARROLL GARDENS

Box 15 Westminster, Md.

BLEEDING HEARTS.

Per 100

Dicentra spectabilis, 3 to 5-eye \$25.00

Dicentra spectabilis, 5 to 8-eye and up 35.00

Dicentra eximia, 3 to 5-eye 15.00

Dicentra eximia, 5 to 8-eye and up 20.00

J. HENDRIKS, Grower Portage, Mich.

COLORFUL MUMS.

Strong field-grown clumps of 150 colorful hardies from our test gardens. Available now for winter propagation. Write today for descriptive price list.

RAIRIE SOUTHWEST FLORETUM

R. F. D. 1, Box 103 Fall River, Kan.

BLEEDING HEARTS.

Each

Dicentra spectabilis, 3 to 5 eyes \$25.00

Dicentra spectabilis, 5 to 8 eyes 35

Well developed, field-grown roots.

CASHAW W. EVANS, Selbyville, Del.

America's Best Source for Hardy Plants in

THE WAYSIDE GARDENS

Mentor, Ohio

Write for Trade List.

Pansies, perennials and rock plants in

wide variety. Send for catalog.

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Bristol, Pa.

ROSEBUSHES

ROSES—Ready for immediate or later delivery. Fine assortment of northern-grown roses, all carefully graded and packed. Never grew a finer healthier crop. Quality is our main consideration. Many new ones developed, most recently located for the central states, and close to eastern territory. Save long-distance freight charges and shipping risks. Your inquiries will have our prompt attention.

GERARD K. KYLN, Inc. Mentor, Ohio

Largest Grower of Northern-grown Roses in the Central States.

ROSEBUSHES.

THERE IS NO SUBSTITUTE FOR QUALITY. We offer to the trade ROSES OF EXCEPTIONALLY HIGH QUALITY and in a good range of varieties. You will notice that our variety list has been shortened. We are sold out on some varieties and do not have many of others, so may we suggest that you place your order as early as possible while we still have a fairly good selection.

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White American Bt.

Talisman's Scarlet

Red Radiance

Caledonia

Mrs. P. S. duPont

Pink Radiance

Snow Queen

RED.

Red American Beauty

Red Radiance

Etoile de Holland

Syracuse

Rouge Mallerin

Poinsettia

Grenoble

Ami Quinard

Editor McFarland

Golden Charm

Golden Dawn

McGreedy's Yellow

Golden Ophelia

Mrs. P. S. duPont

Luxembourg

Roslyn

K. A. Viktoria

Red American Beauty

Yellow Condessa

WHITE.

Talisman

Pres. H. Hoover

Contessa de Sastago

Edith Nellie Perkins

RED.

Red Radiance

Etoile de Holland

Syracuse

Rouge Mallerin

Poinsettia

Grenoble

Editor McFarland

Golden Salmon (yellow)

Contessa de Sastago

(multicolor)

Margaret McGreedy

(orange)

American Beauty

(red)

Pres. Hoover

(multicolor)

Sous Therese (yellow)

Est. 1877

CALL'S NURSERIES, Cal. Rd., Perry, Ohio

ROSEBUSHES—2-yr. plants, grown right, graded right, packed right. Very complete assortment varieties. Ask for price list and book your requirements now.

ROSEMONT NURSERIES

D. L. Thompson, Mgr.

Box 839

Tyler, Tex.

ROSES.

The newest varieties of Roses. Hybrid Teas, Everblooming, Floribundas and Dwarf Polyanthus in the best novelties.

Large quantities of greenhouse varieties which can be imported to America, remaining under the phytosanitary control for two years.

SPECIAL CONDITIONS

FOR THE FIRST TRIAL ORDER.

Price: \$20.00 per 100, budded on Rosa canina, free European port, free packing with order of 5,000 bush roses.

Novelties: \$1.00 each.

30,000 Peace available.

ALFRED LAMESCH (Est. 1871)

22 Rue de Beggen

Dommedange, Luxembourg

NORTHERN OHIO FIELD-GROWN ROSES.

Write for list.

LESTER F. SQUARE NURSERIES

Wholesale Growers

Painesville, Ohio

SEEDS

FRESH 1949 CROP SEEDS.

	Per lb.
Longleaf Pine, <i>Pinus palustris</i>	..... \$3.00
Slash Pine, <i>Pinus caribaea</i>	..... 5.00
Chinquapin, <i>Castanea pumila</i>	..... 1.50
Ilex glabra, smooth-leaved Holly	..... .75
Ilex cornuta, yaupon	..... 1.50
Juglans cordiformis, Jap. Walnut	..... .60
Cornus florida, White Dogwood	..... .50
Pecan, small	..... .25

STOVAL NURSERY Leakesville, Miss.

FRESH COLLECTED, 1949 CROP.

	Per lb.
Cornus florida, dried berries	..... \$0.75
Viburnum dentatum, dried berries	..... .75
Ilex opaca, fresh dried berries	..... .65
Ilex opaca, clean seeds	..... 3.00

WILLIAM J. WRIGHT

R. D. 1 Bridgeton, N. J.

SEEDS.

Dried Nandina berries, 1949 crop, 1 to 4 lbs. \$2.75 per lb., 5 lbs. and over, \$2.50 per lb. Express charges collect. Cash with order.

ANDREWS' NURSERY

Box 422 Chapel Hill, N. C.

SHRUBS AND TREES

SHRUBS.	Per 100
BALTIC IVY	..... \$16.00
Out of flats, T. 2 1/4-in. pots	..... 20.00

EUONYMUS PATENS	10.00
6 to 9 ins. T. 2 1/4 ft. 3 ft.	..... 35.00

PLUM, NATIVE	30.00
2 to 3 1/2 to 5 1/2-in.	..... 30.00

PRIVET, AMUR RIVER NORTH	5.00
12 to 18 ins.	..... 18.00

PRIVET, REGAL	18.00
12 to 18 ins.	..... 18.00

PYRANCATHA LALANDI	18.00
Out of flats, T.	..... 20.00

WILD GRAPE	3.50
15 to 18 ins.	..... 3.50

TREES.

HACKBERRY	40.00
3 to 4 ft. T. 4 to 5 ft. T.	..... 60.00

OAK, RED	300.00
3 to 4 ft. 8 to 10 ft. TT.	..... 600.00

POPLAR, LOMBARDY	375.00
3 to 4 ft. 1-yr. 4 to 5 ft. 1-yr. 4 to 5 ft. 2-yr. well branched. 5 to 6 ft. 2-yr. well branched. 6 to 8 ft. 2-yr. well branched.	..... 7.50 9.00 20.00 25.00 35.00 35.00

WALNUT, BLACK	10.00
4 to 6 ft. 8 to 10 ft. TT.	..... 10.00 60.00

C.O.D. shipments must be accompanied by 25 per cent cash. Packing and boxing at cost.	
NEBRASKA NURSERIES, Inc.	

4815 "O" St.	Lincoln 8, Neb.
LINING-OUT STOCK.	

1-yr. Seedlings.

Per 100	
935 Ampelopsis heterophylla, to 12 ins.	..... \$4.50
1500 Berberis thunbergii, 1 to 3 ins.	..... 2.00
300 Berberis thunbergii, 3 to 12 ins.	..... 3.00
15000 Berberis thunbergii, 1-yr. 2 to 9 ins.	..... .75

Per 100	
400 Catalpa speciosa, 12 to 24 ins.	..... 4.00
800 Celastrus orbiculata, 4 to 6 ins.	..... 2.00
1750 Cornus florida, 3 to 6 ins.	..... 2.00
2700 Cornus florida, 6 to 12 ins.	..... 5.00
1360 Cydonia japonica, 4 to 6 ins.	..... 3.00
1650 Cydonia japonica, 6 to 18 ins.	..... 6.00
1650 Lindera benzoin, 2 to 4 ins.	..... 2.00
400 Lindera benzoin, 4 to 6 ins.	..... 3.00
600 Syringa villosa, 2 to 4 ins.	..... 2.00

ADAMS NURSERY, Inc.
P. O. Westfield, Mass.

RED JAPANESE MAPLE SEEDLINGS.
Carefully selected for good red color.

Per 100

Per 100	
Acers palmatum atropurpureum 10 to 13 ins. XX.	..... \$40.00
8 to 10 ins. XX.	..... 30.00
8 to 8 ins. XX.	..... 25.00

ELWOOD HUBBS
204 Delaware Ave. Palmyra, N. J.

NURSERY-GROWN STOCK.

Cornus florida, White Flowering Dogwood.

Per 100 Per 1000

6 to 12 ins. s.	..... \$2.50	..... \$20.00
12 to 18 ins. s.	..... 3.50	..... 30.00
18 to 24 ins. s.	..... 4.50	..... 40.00
2 to 3 ft. br.	..... 5.00	..... 50.00
3 to 4 ft. br.	..... 7.50	..... 70.00

Ligustrum sinense.

Amur River South Privet.

Per 100

6 to 12 ins. s.	..... 4.50
12 to 18 ins. s.	..... 6.00
18 to 24 ins. s.	..... 7.00
2 to 3 ft. br.	..... 10.00

Juniperus virginiana.

Red Cedar.

Per 100

6 to 9 ins. tr. x.	..... 5.00	..... 40.00
9 to 15 ins. tr. x.	..... 6.00	..... 50.00
15 to 18 ins. tr. x.	..... 7.00	..... 60.00
All stock below in first-quality, collected		

Stock abdomen in first-quality, collected

SUPPLIES—Continued

Now is the time to build new low-cost shade houses, or to replace your old work-out lath or slab houses with Hand New Low-Cost Heavy Steel Wire Netting. This material is made of 16-gauge steel wire, 2x6-in. mesh, garnished with steel wool and coated with high-grade enamel. Each roll is 75 ft. long by 6 ft. wide, containing 450 sq. ft. Inexpensive and easy-to-construct lath houses built with this netting provide uniform shade ideal for Azaleas, Camellias and for all other plants. Available for immediate shipment. Write for descriptive folder and prices to cover any quantity you may need from one roll to carload shipments.

H. M. OWEN E. A. FARLEY
P. O. Box 946 3333 Gentilly Blvd.
Columbus, Miss. New Orleans, La.

ELECTRIC PROPAGATING KITS.
FOR GREENHOUSE BENCHES OR HOT-BEDS—Each contains long-lasting HEAT-SUM CABLE, Soil Thermostat, Pilot Lamp and Thermometer.

Unit Heated	Length and Width	Volts	No. Units	Price
A	20' 200	110	1- 50 ft.	\$18.93
B	40' 400	110	2- 50 ft.	23.83
D	80' 800	110	1- 300 ft.	32.43
E	150' 1500	110	1- 500 ft.	48.93
F	300' 3000	220	1-1000 ft.	76.30

All prices F.O.B., Seattle.

COLD FRAME FROST PROTECTION — Same equipment will protect 50 PER CENT MORE AREA. LITERATURE ON REQUEST.

L. N. ROBERSON CO. 1539 East 103rd St. Seattle 55, Wash.

MICHIGAN PEAT. "HIGH NITROGEN-QUALITY PEAT"

Reliable, efficient, economical, 9% per cent organic, pH 4. Serving leading nurseries for over 30 years. Fine, medium and coarse grinds. OUR BAGS ARE HUGE! Carloads, truckloads, bulk and bagged.

2 to 100 bags (4 to 8 bu.), only \$1.50 ea. F.O.B. Capac, Mich. Dealer franchises open. Teach more M.L. dealers a better job cheaper. WHY PAY MORE? Order today!

MICHIGAN PEAT, Inc. 267 Fifth Ave. New York 16, N. Y.

NURSERY REQUISITES. Budding, Grafting Supplies, "TRE-TEX," Hydrometers, Hygrometers, Magnifiers, Pruning and Spraying Equipment, Ladders. Catalog on request.

Since 1900. TYSON ORCHARD SERVICE Flora Dale (Adams County), Pa.

COLD FRAMES. Several hundred cypress coldframe sash. Good sound wood, possibly some broken glass. Truck shipments only. \$3.25 each, loaded on your truck at Athens, Ga. \$3.25 each, F.O.B. truck Norfolk, Va.

EVERGREEN LANDSCAPE SERVICE Athens, Ga.

MINNESOTA WHITE CEDAR FLATS.

12x16x2% \$16.24 per 100

14x20x2% 20.00 per 100

14x20x3% 23.00 per 100

Other sizes quoted on request. Also crating and other lumber. Aspen and Pine. F.O.B. Cook, Minn. Please attach check.

H. C. HILL & SONS, Cook, Minn.

PEAT MOSS. Highest-quality acid sphagnum peat moss, weighing about 8 lbs. per loose bushel. 120-lb. hydraulic-compressed bales, \$3.25 each; 10 or more bales, \$3.00 each. Large burlap half-bale bags, \$1.50 each; 10 or more, \$1.50 each.

COLBY PIONEER PEAT CO., Inc.

Hanlontown, Iowa

HARDWOOD CUTTING MACHINES.

Save time, save labor, save money. Use Wilson's Hardwood Cutting Machine to make up your cuttings. Cutting blades made of bent steel, sharpened and will keep a keen cutting edge. Particulars on request.

RUSSELL WILSON

Winnsboro, Tex.

BLACK MAGIC PEAT MOSS.

Mixed with soil for potting plants. Aerates, lightens soil and holds moisture. Keeps plants flourishing.

90c per bu., 10 bu. for \$7.50. F.O.B. Rogers, Ark.

BENTON COUNTY NURSERY CO. Inc.

Rogers, Ark.

WISCONSIN'S QUALITY SPHAGNUM MOSS.

Clean, long-fibered, solidly packed in burlapped or wired bales of standard size, direct from drying beds. None better.

Trucked when feasible.

WARREN'S MOSS CO., Box 7, Warrens, Wis.

PRINTING.

Full-color printing of catalogs, pamphlets and folders. Full-color picture tags and labels of Roses, Fuchsias, etc., for individually wrapped nursery stock. Samples available.

THE COLOR PRESS

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HIGH NITROGEN HORTICULTURAL PEAT.

Unexcelled for soil-improving work. Used by leading growers for a quarter century.

One 3-bushel bag, \$1.25; 10 bags, \$1.15; 25 bags or more, \$1.00 each.

COLBY PIONEER PEAT CO., Inc.

Hanlontown, Iowa

TREE DIGGERS. The Tree Digger gets all the roots with your Fruit Trees, Shade Trees, Flowering Shrubs, Rosebushes, etc. Nursery stock properly dug with all the roots means satisfied customers. Particulars on request.

RUSSELL WILSON

Winnsboro, Tex.

ROPER HIGH-SPEED HOLE DIGGER. 24-in. blade will mount on International H or M. New condition, \$150.00.

LONGVIEW NURSERY

Prairie View, Ill.

GIBRALTAR FROST COVERS pay for themselves. Economical, long-lasting, ideal for windbreaks. 6 ft. wide; 50 ft. \$13.75; 100 ft. \$26.00; 150 ft. \$39.00. NEW AMSTERDAM IMPORT, 122 Chambers St., New York 7, N.Y.

SPHAGNUM MOSS. Write for prices on burlapped and wire-bound bales.

THOMAS RESHEL City Point, Wis.

PRINTING—LETTERHEADS, BILLHEADS, STATEMENTS, CARDS, ENVELOPES, TAGS, BLOTTERS, FOLDERS, SAMPLES, ETC. J. GARLAND HILL, Dept. A, Seaford, Del.

PAY LESS FOR WOOD LABELS. High quality, fully guaranteed. Write for prices and samples. ANTHONY & CO., Escanaba, Mich.

If you don't find it listed here, try a wanted ad in the next issue of the American Nurseryman.

WANTED

WANTED. 5000 Euonymus and Viburnum in lining-out sizes; also a few thousand liners in Hebeberry, American Holly, Japanese Dwarf Maple, Sweet Gum, Hydrangea, Spiraea, Lonicera, Barberis, Hackberry, Boleanea Poplar, Blue Spruce, Concolor and Douglas Fir, Upright and Spreading Yew.

EGYPTIAN NURSERY & LANDSCAPE CO. Farina, Ill.

NURSERY STOCK WANTED. Azalea, Macrorhynchum.

Sizes, 12 ins. and up.

Vinca minor, Bowles variety.

Field clumps.

THE PETER CASCIO NURSERY

2600 Albany Ave. West Hartford 7, Conn.

WANTED. 10,000 each, Canadian Hemlock, 6 to 12-in. transplants, and Colorado Blue Spruce, 4 to 8-in. transplants.

SUNCREST EVERGREEN NURSERIES

Box 643 Johnstown, Pa.

WESTERN WASHINGTON HORTICULTURAL MEETING.

[Concluded from page 14.]

ing at the northern border of the native zone.

In the northwest especially, Mr. Mulligan pointed out, there are greater possibilities for more types of plants than are usually grown.

However, in order to obtain the best results it is necessary to provide ideal conditions through providing ways for cold air to drain away from the planting site. Excess water must also be allowed to drain. Culture during the season is also important. Watering during the late summer and early fall should be avoided, as should late fertilizing, as these tend to produce a succulent growth easily injured by freezing.

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Dr. Breakey discussed control measures for holly bud moth, holly leaf miner and soft brown scale. The holly bud moth is represented as one of the worst insects on holly. Eggs are laid at the base of the leaf by the adult moth from late summer on and hatch in late March just as new leaves are forming at the tips of branches. Larvae bind these together and feed on the tip. Good control

Holly Problems.

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PLANT NOTES.

[Continued from page 18.]

gate from fall-sown seeds and from division in spring.

The Giant Daisy.

I was pleased last fall to find the giant daisy, *Chrysanthemum uliginosum*, in at least two nurseries that I visited. I was pleased not so much because I have been singing its praises for years, but rather because it will make our gardens more pleasant, and anything that does that will boost the sales of commercial plant growers. When summer is on the wane, this plant shows its worth with an abundance of large white daisies on tall stout stems, beautiful in a myriad associations and excellent for cutting, two uses which make for plant sales.

In the ordinary good soil of the hardy border, the giant daisy will grow four or five feet tall, with sturdy stems, clean foliage and a large quantity of flowers; give it the moisture-laden soil that it is said to choose in its native Hungarian home, and it may grow up to seven feet tall, making one of the most spectacular plants in the late summer garden. If this appraisal seems overly enthusiastic to you, increase what has been said by twofold and you will still fall short of the actual worth of the plant, first, as a landscape ornament, and second, for cutting. Fall-sown or winter-sown seeds germinate readily, and the plant may be further multiplied by division.

Sedum Hybridum.

An Ohio correspondent sent me for identification a single branch of a sedum with seed vessels attached. Although I do not ordinarily attempt that task, being too far from a good herbarium, I am glad to do this one, because it represents a stoncrop, *Sedum hybridum*, with which I have been familiar for more years than I care to remember and further because it is one of my favorite landscape sedums.

Although *S. hybridum* has been known for centuries, having been described by Linnaeus in 1753, it is still rather uncommon in gardens, especially under its correct name. That is not as it should be, though, for it is one of the most ornamental of the aizoon section of sedums. Unlike most of that group, it is evergreen, with creeping branches clothed with alternate leaves, generally spatulate, which assume brilliant fall and winter colors. Here it generally has two flowering periods, one in late spring and the other in

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late summer, when there appear bright yellow flowers in umbellate cymes.

Unfortunately, *S. hybridum* is more often than not misnamed in gardens, appearing under such labels as *S. kamtschaticum*, *S. middendorffianum* (the specimen at hand came under this label), *S. floriferum* and otherwise, but it may be distinguished from all of these by its creeping habit and from all except *S. floriferum* by its linear sepals. If the inquirer will compare his plant with true *S. middendorffianum* he will see that his *hybridum* has broader leaves and that his plant has creeping barren shoots while those of *middendorffianum* are more or less erect. There are several other differences, mostly technical, but the ones mentioned serve to set *S. hybridum* apart from all others of the aizoon section.

Anemonella Thalictroides.

The botanists have had such a grand time with the little plant which heads this note that it would be interesting to follow their peregrinations if space were available, but a short quotation from Meehan's "Native Flowers and Ferns" will have to suffice. "The great Linnaeus," he wrote, "believed it to be an anemone, and in this view he was followed by Aiton, Widenow and most of the older European botanists of America. Michaux first classed the plant with *thalictrum*, under its present specific name, *T. anemonoides*, and the same classification has been adopted by Darlington, Gray, Chapman and the majority of modern botanists."

It should be noted, however, that the name now generally accepted is *Anemonella thalictroides*, which was given it by Spach, though still another name, *syndesmon*, given it by Hoffmannsigg, is used by some.

The important phase of the plant to the commercial grower, as distinguished from the plant student, is that it is a splendid addition to any list of spring-flowering plants for shade, adding graceful airy foliage of small stature (nine inches) and a myriad small anemone-like flowers to the spring scene. Generally, the flowers are white and not unlike those of the eastern wood anemone, though they vary to rose, and flowers of various degrees of doubleness are found in nature. It is propagated from fall-sown seeds and from divisions of the thickened tuberous roots.

Psephellus Heterophyllus.

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centaureas and centaurea cousins from the Mediterranean regions and western Asia, do not let that experience deter you from trying *Psephellus heterophyllus* when it is offered you. This is one of the centaurea

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[Continued from page 9.]

Texture and form are other things that we look for in a tree or shrub. Generally shrubs with coarse leaves and stems are best used in the back of the shrub border, while shrubs with fine-textured leaves are selected for the foreground and for the foundation planting. Form is as variable as the plants concerned. Each has its own peculiar form and each in its own way has a place in the planting. Usually we look for plants with upright form for the corner of the house. Under the windows we need something that is low-growing. For the rock garden we need the creeping forms.

Often we shy away from the native shrubs because they lack the form and symmetry that we associate with a good landscape shrub. These same shrubs, grown in the open with good care may become far more attractive than they were in the wild.

We might ask ourselves why we have literally hundreds of varieties of such shrubs as the lilac and the mock orange while we have few or no recognized varieties of our native shrubs such as the gray or the pagoda dogwood. The answer is, of course, in the length of time that these shrubs have been under cultivation and careful observation. The fact that variations exist among our native shrubs is well known. However, when these variations do occur, they generally go unnoticed and may become lost through natural competition. To cite some of the variations that do exist, all we need do is examine some of the few native trees and shrubs that have entered the nursery trade. Over thirty varieties of eastern red cedar and fifty varieties of northern arborvitae are cultivated. The red-leaved sport of the common chokecherry has but recently been introduced, and a yellow-berried form of the buffalo berry has been selected at the Morden station.

Let us look at some of our native trees and shrubs that might serve as useful landscape materials. Ash, basswood, birch, bittersweet, bladdernut, buffalo berry, burning bush, cinquefoil, dogwood, elder, elm, hackberry, hickory, hawthorn, honeysuckle, maple, mountain ash, mountain holly, serviceberry, silverberry, snowberry, sumac, oak, ninebark, viburnum, walnut, willow and winterberry are but a few that are suitable for landscape planting. Among this list we recognize many that are grown and sold by our nurs-

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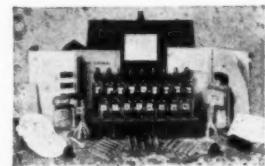
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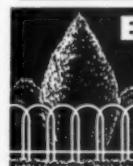
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ries. Many others, however, are little known in the nursery trade.

Before all of the material listed here can or should be grown by nurserymen, there is considerable research needed to select those forms best adapted for landscape use, to determine the best methods of propagation and the conditions under which each will survive. An equal amount of work is needed in testing forms that are not native here, to determine their possible value. The Morden station has done a lot along this line, but tests need to be made in various parts of Minnesota before recommendations can be made. For example, a species of cotoneaster with red berries fruited this year in our shrub jungle at the university farm that shows much promise. It should be tested over the state.

There are, no doubt, many possibilities for crossing some of our hardy native species with some of the better known eastern and European forms that may lack hardiness. It would be interesting to know whether our native pagoda dogwood would cross with the pink-flowered dogwood of the east and what the result might be. Could we cross our native black currant with the red-flowered currant growing native on the west coast and get a hardy red-flowered currant? These and other problems await the plant breeder.

SELF-LOADING SPRAYER.

A new wheelbarrow-type, self-loading, compressed air sprayer has been announced by Champion Sprayer Co., Detroit. According to Vincent Santarelli, president of the firm, powerful insecticides and weed killers can be used with improved security against skin contact and irritation with this machine.

The new model features the Auto-load trade-mark, indicative of the ability of this new compression unit to take on its own liquid as well as air and to simplify the handling of strong solutions. With the Auto-load, the sprayer loads as the pressure is pumped up. One pumping of action of fifty or sixty strokes draws spray solution from the 15-gallon reserve tank on the wheelbarrow into the compression unit and at the same time pressurizes it. Thus, one pre-spraying operation provides continuous spraying of three and one-half gallons at a nearly constant pressure of seventy-five pounds.

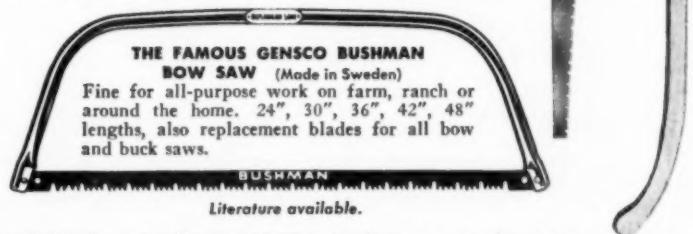
In addition to its use as a row crop, vineyard and orchard sprayer, the Champion wheelbarrow model can be used for insect and animal pest control, weed control and liquid fertilizer distribution.



Properly pruned trees, vines and shrubs grow better, bear heavier. To do an improved job of pruning, Gensco offers five groups of saws to fit every need.

Patented tooth arrangement cuts on *forward* and *back* strokes. Swedish steel blades have a razor sharp cutting edge (stay sharp longer) for the smooth cut necessary in good pruning.

Styles include long and short handles, tubular extensions, pistol grips and folding types. Handles are hard polished birch with clear weather proof finish.



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CHINESE CHESTNUT.

[Continued from page 8.]

found both it and Carr to be difficult to graft.

Honan.

Honan was introduced by Carroll Bush while at Eagle Creek, Ore. It was from the same lot of seeds as Abundance, and scions and later trees were sold simultaneously with Abundance. Fayette Etter, who has made careful comparisons, believes Abundance to be the better variety. The principal difference is in size, with Abundance being somewhat the larger. Also, Honan is slightly less desirable in other ways.

Kuling, Meiling and Nanking.

All three varieties derived from seeds shipped from China by Peter Liu, Chekiang province, early in 1935; Kuling, Meiling and Nanking were of the crop of 1934. Hangchow was the shipping point from which the seeds for Kuling and Nanking were sent, and Hsienting was the mailing point for Meiling. It was from Hangchow, in 1853, that the first Chinese chestnut seeds were sent from that country. At that time, Robert Fortune, an English plantsman, shipped nuts of what he then supposed were the same species as the European chestnut, *Castanea sativa*, to the Himalaya mountains, in India, in the hope of establishing there a new food crop. Hangchow is located at about the same latitude as Jacksonville, Fla. G. F. Gravatt, in charge of chestnut breeding in the United States Department of Agriculture, bureau of plant industry, reports that two Indians visited his office recently and said that, while there are a few chestnut trees in the Himalayas, they do not amount to much. However, they will investigate and report later.

The seeds from Mr. Liu were not particularly impressive, either as to size of nut or flavor, but some of the resulting seedling trees have turned out surprisingly well. Several trees grown at the United States pecan field station, Albany, Ga., began bearing three years later, in 1938. In 1941, three were selected and given varietal names. The original tree named Kuling has since borne 151 pounds of nuts; the one called Meiling, 196 pounds, and Nanking, 205 pounds. Kuling was the only one of the three that bore a crop in 1942.

The original planting, in 1941, consisted of 334 trees set 25x25 feet apart. Sixty trees which made the poorest showing have since been removed. This leaves 274 trees standing in the original planting. In 1947,

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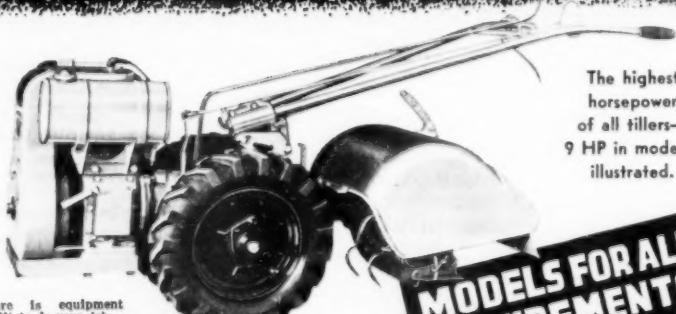
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188 trees bore a total of 6,615 pounds of nuts, the heaviest bearer yielding 108 $\frac{1}{2}$ pounds. As evidence of the variability among seedlings, in 1946, 173 trees bore and 101 did not.

Since 1943 none of the three has had a crop failure. Nanking has had slightly the largest nuts, with its crops running from thirty to forty-three nuts per pound, as compared with thirty-five to forty-three for Kuling and thirty-eight to forty-three for Meiling. Scions of each variety have been placed in the hands of nurserymen, and already all have become

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F. O. B. nearest shipping point.

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available to the general public in this way.

Milford.

Milford has been known for a number of years, but has been grafted little. The parent tree stands in the midst of a rather crowded plant-

ing owned by Frank B. Austin, Milford, Del. Scions have been sent to several nurserymen, but not all have reported.

Stoke (Stoke Hybrid).

Stoke appears to be the result of a natural cross between the Chinese and Japanese chestnuts. The original tree is from a chance nut picked up on the grounds of United States Department of Agriculture, the division of plant exploration and introduction garden, Glenn Dale, Md., where the late Dr. W. Van Fleet did much of his work. The tree was grown by Mr. Stoke, whose attention was soon attracted by its early bearing and early maturing. In southwestern Virginia, the nuts frequently begin to ripen during the third week of August. In appearance the nuts greatly resemble pure Japanese chestnuts. The variety bears well, but the nuts lack palatability.

S-8.

S-8 was the designation given, after Dr. Van Fleet's death, to the parent tree in his planting made at Glenn Dale. The name was derived by combining the row letter and the tree number. It was released by the United States Department of Agriculture with decidedly crossed fingers, for while it was prolific, it was only a shade more palatable than the average Japanese kind. It was, apparently, a crenata x pumila hybrid, bred by Dr. Van Fleet before the superiority of mollissima over crenata was fully realized. Later, S-8 became subject to blight.

Yankee (Connecticut Yankee).

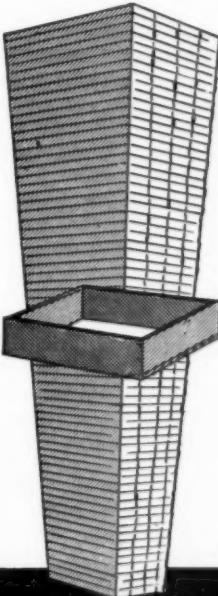
Yankee originated as a chance seedling on the property of E. N. Hunt, Riverside, Conn. It is an introduction of Dr. J. Russell Smith. Nothing more is known of the variety than is contained in his catalog.

Zimmerman.

Zimmerman originated as a 1930 selection made by the late Dr. G. A. Zimmerman, Linglestown, Pa., from a number of seedlings grown from seeds imported by him directly from China. Since the death of Dr. Zimmerman, the identity of the parent tree has been lost. However, the variety has been continued by nurserymen, and about as many trees have been sold of Zimmerman as of any other variety. It is easier to graft than some others, and, while the nuts are a little small, it is a good staple variety.

Potential Varieties.

To originate a variety is not difficult, nor is there danger of having



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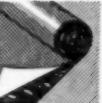
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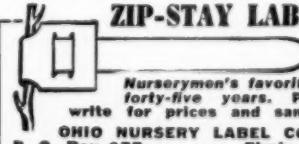
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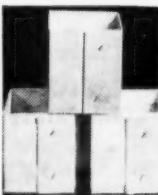
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2 x 2 x 2 1/2	4.10	3 x 3 x 3	4.90
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2 1/2 x 2 1/2 x 2 1/2	4.45	4 x 4 x 4	6.00

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Saves time and labor. Bands are removed without cutting; therefore, the dirt ball and roots are not disturbed.

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No. M-310	1 1/2 x 1 1/2 x 2 1/2	12 lbs.	\$3.75
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2 x 2 x 2 1/2	5.40		3.35
2 x 2 x 3	5.90		4.15
2 1/2 x 2 1/2 x 3	6.95		4.75
3 x 3 x 3	8.10		5.65
4 x 4 x 3			7.35
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Tom Thumb Flats Per 1000	Combination 1000 Flats	Combination 1000 Flats
	12,000 Vita-Band 40 Per 1000 Sets	12,000 Vita-Band 10 Per 1000 Sets
Size No. 1	Size No. 2	Size No. 1
\$35.80	\$39.85	\$88.15
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too many varieties introduced. To have a large number of varieties on trial throughout the country at one time is the quickest and surest way to find which ones are best. Do not wait for nurserymen or state and federal experts to say what you should propagate. Try your own hand at grafting. Work over your poorest trees with scions from your best, and so raise your average, all within your own resources. You should have a test row or a few trees on which you can graft every promising variety that you can obtain.

Dr. Otto Behrend, Erie, Pa., sent in specimen nuts from two trees in the fall of 1948. One was comparatively small and the other of good size. The doctor regarded the larger nut with little favor, because it was not so sweet as the smaller nut. However, it was Chinese, hardy at Erie, reasonably good eating and perhaps a good bearer. For that part of the country it is certainly worth investigating.

West Coast Varieties.

So far, California, Oregon and Washington have contributed little in the way of varieties which are of interest to other parts of the country. Principal advances in that section have been made with European kinds which, to a great extent, have been regarded as American. The first Chinese chestnuts received in this country, from Mr. Myer in 1906, went to Chico, Calif. It was nearly thirty years later that Carroll Bush imported seeds to Oregon from which were developed Abundance and Honan. Several varieties have been selected from the Chico trees, but apparently some confusion exists among them.

State quarantines, as a means of controlling blight, have thus far prohibited the entry of eastern sorts, but since that disease is becoming better understood, there are signs that these artificial barriers may be lifted. The three government varieties from Albany, Ga., were first distributed in 1946 and 1947 to twenty-five or thirty nurserymen, and, from reports received, excellent success was had in grafting. Most nurserymen who received propagating wood now have a few trees for sale. Nuts of the Albany varieties, grown in 1948 by Arthur Gold, Cowen, W. Va., were of practically the same size as those at Albany. The altitude at Cowen is about 2,200 feet, and winter conditions are severe.

The author has been informed by Dr. Harald E. Hammar, associate chemist in charge of the bureau of

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USER REPORTS

plant industry station, at Albany, Ga., that the quality of Chinese chestnuts has been found to deteriorate rapidly unless the nuts are stored at 32 degrees or thereabouts soon after curing.

The illustration on page 8 showing the nut of a Chinese chestnut, and below it the nut of a Japanese chestnut, may help growers to determine for themselves whether or not their chestnut trees are of the Chinese or Japanese types. The Chinese nut is nearly round, has a small basal scar and may or may not have down over the surface. The Japanese nut is considerably pointed, usually of a yellowish-brown color, with almost no down over the surface. The basal scar is usually large, often extending well up the side of the nut. The texture is coarse, and the flavor is decidedly poor until it is cooked. The leaf of the Japanese chestnut is stiffly veined.

HEADS OHIO FORESTRY DEPARTMENT.

Dr. Oliver D. Diller, associate forester of the Ohio agricultural experiment station and assistant professor of forestry at Ohio State University, has been named chairman of the department of forestry to succeed the late Edmund Secrest, whose obituary appears on another page. The announcement was made by L. L. Rummell, director, after approval by the institution's board of control December 12.

Dr. Diller served as forester of the Central States forest experiment station from 1934 to 1937, when he became associated with the Ohio agricultural experiment station. He is currently in charge of strip mining reclamation research.

The nationally known arboretum at the agricultural experiment station, at Wooster, which was recently named Secrest Memorial Arboretum, will be under Dr. Diller's supervision.

IN OCTOBER the Miller-Parks Nursery & Landscape Service was started at Santa Fe, N. M., by Dean Miller and Wade Parks, who are building a sales office, lath house and greenhouse on the land they recently purchased.

THE nursery department of the Angelo Floral Nursery, 1016 West Beauregard street, San Angelo, Tex., has been taken over by Mr. and Mrs. Basil Havins. Mr. and Mrs. Leon Lederman will continue the flower shop. The Havins have been in the landscape business at San Angelo for a number of years.

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ALL-AMERICA FLOWERS AND
VEGETABLES FOR 1950.

Flower winner in the 1950 All-America Selections is a red petunia. Vegetable winners are a squash and a snap bean, with a regional recommendation to a watermelon.

The only flower to win All-America honors for 1950, Fire Chief petunia, has been awarded the A.A.S. gold medal, the first award since 1938. Actually a spectrum red with a glow of scarlet, Fire Chief grows about twelve inches tall and wide, covering itself with large, plain-petaled flowers from early spring until killing frosts in late fall. In the lower south or indoors it lives on through winter. Though treated and grown as a hardy annual over most of the United States and Canada, the petunia is, after all, a tender perennial.

Fire Chief belongs to the dwarf, compact, hybrid type. The compact plants holds its uniform bushy shape well through the season instead of dividing its center and sprawling over the ground, which makes it good for bedding, low borders and edgings.

Gold medal awards in the vegetable class have been given to UConn squash and Topcrop snap bean. UConn is a true bush form of the popular Acorn or Table Queen type squash. With it there is no waste or loss of fruit, as it is used early in the season as a summer squash and surplus fruits are left for maturity and stored for winter squash. While with the Connecticut agricultural experiment station, Dr. L. C. Curtiss developed UConn from a cross between Acorn and Prolific Straightneck.

Created by Dr. W. J. Zaumeyer, United States Department of Agriculture bureau of plant industry station, Beltsville, Md., Topcrop bush snap bean is the heaviest bearer of all the popular varieties of bush beans and is of the highest eating quality, is green, round-podded, stringless and fiberless.

A regional recommendation and a temporary bronze medal were given Congo watermelon, which may rate higher after its 2-year tests are completed. It matures in ninety days in melon-producing sections in the south and reaches up to sixty pounds in weight. Congo was entered in the All-America trials by C. F. Andrus, horticulturist at the South Carolina agricultural experiment station, Charleston.

LAST fall Joe H. Driver opened Ramal Gardens & Nurseries at Buford, Ga., on ten acres of leased land.

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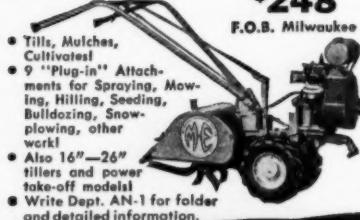
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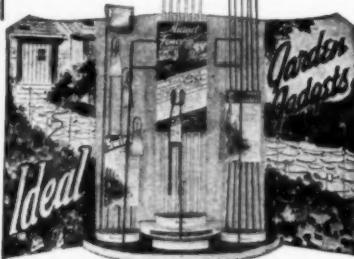
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WHOLESALE LISTS.

Appalachian Nurseries, Waynesboro, Pa.—Deciduous and evergreen lining-out stock and perennials; 8-page folder, 3½x9 inches.

C. R. Burr & Co., Inc., Manchester, Conn.—Ornamental trees and shrubs, hedge plants, vines, rosebushes, evergreens, fruit trees and small fruits; illustrated; 24 pages and cover, 4x9 inches.

Arnold C. Clark Nursery, McMinnville, Tenn.—Shade and ornamental trees, deciduous flowering shrubs, evergreens, native shrubs and vines, hardwood cuttings; 8-page folder, 4x9 inches.

Cunningham Gardens, Inc., Waldron, Ind.—Hardy chrysanthemum rooted cuttings, hardy phlox liners and perennials; 8 pages, 4x9 inches.

N. A. Hallauer, Webster, N. Y.—Hardy herbaceous plants and bulbs; 6-page folder, 4x9 inches.

Lake's Shenandoah Nurseries, Shenandoah, Ia.—Fruit, ornamental and shade trees; ornamental shrubs and vines, evergreens, roses, perennials and peonies; 48 pages and cover, 6x9 inches.

Thomas B. Meehan Co., Inc., Dresher, Pa.—Ornamental trees, shrubs and evergreens; 4 pages, 5½x12½ inches.

Phingstl's Nursery, Montgomery, Ala.—Camellias, azaleas and ornamental shrubs; 16 pages and cover, 4x9 inches.

Somerset Rose Nursery, Inc., New Brunswick, N. J.—Chrysanthemum and carnation cuttings, and supplies; 24 pages, 8½x11 inches.

Wood-Howell Nurseries, Bristol, Va.—Coniferous and broad-leaved evergreens; 6-page folder, 3½x8½ inches.

WHOLESALE CATALOGS.

American Bulb Co., Chicago and New York—Flower, vegetable and grass seeds, bulbs, chrysanthemum and carnation cuttings, and supplies; illustrated; 100 pages and cover, 8½x11 inches.

Bunting's Nurseries, Inc., Selbyville, Del.—Roses, flowering shrubs, trees and vines, shade trees, fruit trees and small fruits, profusely illustrated in color; 40 pages, 9x12 inches.

RETAIL PRICE LIST.

Cunningham Gardens, Inc., Waldron, Ind.—Chrysanthemums, phlox and perennials; illustrated in color; 4-page folder, 9½x12½ inches.

Malmo Nurseries & Seed Stores, Seattle, Wash.—Rosebushes, 16 pages, 5½x8½ inches.

Richmond Nurseries, Richmond Beach, Wash.—Rosebushes, fruit trees, shade trees and flowering shrubs; some illustrations; 4x9½ inches folded.

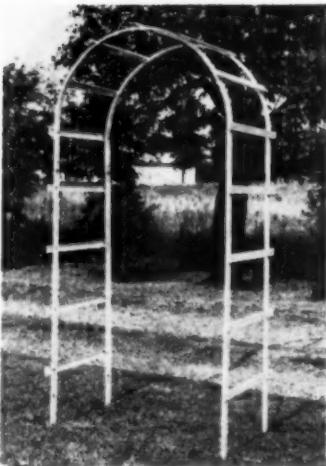
RETAIL CATALOGS.

Armstrong Nurseries, Ontario, Calif.—Roses, camellias, flowering trees, shrubs and vines, perennials and fruit trees; profusely illustrated in color; 96 pages and cover, 8½x11½ inches.

J. H. Faassen-Hekkens, Telegen, Holland—Silver anniversary catalog of deciduous and evergreen trees and shrubs, rosebushes, vines, hardy plants and fruit trees; illustrated; 72 pages and cover, 7½x10 inches.

Fitzgerald's Nurseries, Stephenville, Tex.—Fruit trees, small fruits, nuts, ornamental trees and shrubs, roses; 36 pages, 6x9½ inches.

Kelly Bros. Nurseries, Inc., Dansville,



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N. Y.—Fruit trees, small fruits, flowering trees and shrubs, evergreens, rosebushes and supplies; illustrated in color: 56 pages, 8x11 inches.

Tuttle Bros. Nurseries, Altadena, Calif.—Evergreens, vines, nut and fruit trees, ornamental and shade trees, shrubs, perennials, roses; illustrated, partly in color: 48 pages, 8½x11 inches.

Wayside Gardens Co., Mentor, O.—Perennials, annuals, bulbs, seeds, rosebushes, flowering trees and shrubs; hand-somely illustrated in color: 200 pages and cover, 8½x11½ inches.

Whitten Nurseries, Bridgman, Mich.—Evergreens, fruit and nut trees, small fruits, perennials, roses, shrubs, ornamental trees and vines: 32 pages, 8x11 inches.

NEW PLANT PATENTS.

The following plant patents were issued recently, according to Rummel, Rummel & Snow, Chicago patent lawyers:

No. 881. Euonymus fortunei plant. Clifford D. Corliss, Magnolia, Mass., assignor to Corliss Bros., Inc., Gloucester, Mass. A new and distinct horticultural variety of Euonymus fortunei plant, characterized particularly by its erectness and shapeliness of shrub growth in the absence of support; its vigorous, sturdy and bushy habit of growth in forming from one central stem a neatly rounded evergreen bush; its large, thick and glossy leaves; its hardness and resistance to disease; its ability to stand dry conditions, and the absence of any showing of winter burn.

No. 882. Carnation plant. Emil Prushek, Niles, Mich., assignor to the R. M. Kellogg Co., Three Rivers, Mich. A new and distinct variety of carnation plant, characterized as to novelty by the hardy, vigorous and compact habit of growth; its good production of side branches; its production of well spaced flowers on stiff stems of good cut flower length, that stand up under garden conditions; the absence of splitting of the calyx, and the pink-blush color of the flowers.

No. 883. Rose plant. Herbert C. Swim, Ontario, Calif., assignor by mesne assignments to Eldon Pinkeney Dering, doing business as Peterson & Dering, Scappoose, Ore. A new and distinct variety of hybrid tea rose plant, characterized as to novelty by its vigorous habit of growth to from five to seven feet; production of long flower stems relatively free of thorns and glossy foliage of large size; flower buds of relatively great length, appropriate for cut flower utility, and a color in bud and flower distinct from any known variety.

No. 884. Pyracantha plant. Kosaku Sawada, Crichton, Ala., assignor to Overlook Nurseries, Crichton. A new and distinct variety of Pyracantha koidzumi plant, characterized by its dwarf globular growth, its distinctive foliation and its absence of thorns.

No. 885. Rose plant. Herbert C. Swim, Ontario, Calif., to Armstrong Nurseries, Inc., Ontario, Calif. A new and distinct variety of rose plant, characterized as to novelty by vigorous growth and production of large, leathery and glossy foliage; high degree of resistance to mildew and black spot; the form of the buds and flowers and their coloring in the respective stages of development; the long, strong flower stems and their relative freedom from prickles, and the penetrating tea rose fragrance of the flowers.

No. 886. Rose plant. Herbert C. Swim,

Ontario, Calif., assignor to mesne assignments to Inter-State Nurseries, Inc., Hamburg, Ia. A new and distinct variety of rose plant, characterized as to novelty by its upright, moderately branched growing habit with a normal amount of large, leathery, glossy leaves and more than average resistance to mildew, and by its production of buds of average to large size, opening to large flowers five to six inches in diameter and of unusual colors.

No. 887. Japanese holly plant. Warren E. Stokes, Butler, Pa. A new and distinct variety of Japanese holly plant, characterized by its exceedingly dwarf, dense, compact habit of growth, the small size and closeness together of its leaves, its hardiness and its adaptability for either hedge or specimen use.

No. 888. Peach tree. Charles O. Grissinger, New Cumberland, Pa., assignor to Stark Bros.' Nurseries & Orchards Co., Louisiana, Mo. A new and distinct variety of peach tree, characterized as to novelty by the white flesh of its fruit, marked with a thin yellow flesh segment extending along the suture line from stem to tip and through the skin, appearing externally as a narrow yellow stripe along said line; by the excellent flavor and quality of its fruit, slightly less acid than possessed by its parent variety; by the firmness of its flesh, and by the absence of the yellowish tint from the foliage.

No. 889. Rose plant. Svend Poulsen, Copenhagen, Denmark, assignor to the Conard-Pyle Co., West Grove, Pa. A new and distinct variety of rose plant of the hybrid polyantha class, characterized as to novelty by its adaptability for use as cut flowers and garden decoration; its exceptionally vigorous growing habit over a long blooming period; the extraordinary freedom of flowering; the purity of the color of its flowers, and the excellent form and large size of said flowers.

No. 890. Strawberry plant. William E. Silva, Sebastopol, Calif. A new and distinct variety of strawberry plant, characterized by its sturdy growth, productiveness of fruit and absence of runners.

No. 891. Camellia plant. John S. Armstrong, Ontario, Calif., assignor to Armstrong Nurseries, Inc., Ontario, Calif. A new and distinct variety of camellia plant, characterized as to novelty by its vigorous growing habit and strong tendency to precociousness; by the size and abundance of its foliage, and by the size and color of the flowers of heavy substance, said plant also having an unusual blooming season in comparison with other known white camellias of this form.

No. 892. Climbing rose plant. Carl W. Chaffin, Ontario, Calif., assignor to Armstrong Nurseries, Inc., Ontario, Calif. A new and distinct variety of rose plant, characterized as to novelty by its vigorous climbing habit, in combination with the season of bloom and the manner in which its blooms are produced.

No. 893. Climbing multiflora polyantha rose plant. Ralph S. Moore, Visalia, Calif. A new and distinct variety of hybrid, multiflora polyantha rose plant, characterized as to novelty by its prolific habit of blooming in terminal and lateral clusters in spring and early summer followed by blooms in clusters intermittently and less heavily during the remainder of the growing season; by its climbing habit; by the form and pink shade of its individual flowers progressively varying to lighter and softer shades of pink at the peak of bloom and throughout the remainder of the growing season; by the almost com-

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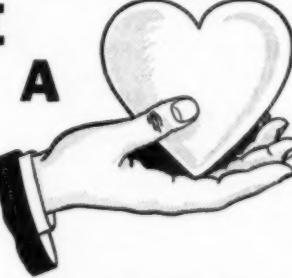
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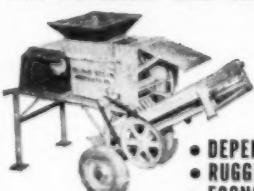
"He who reads 'Surgery with a Spade' is bound to have his ears burn the moment he errs about plant care"—Book Review, American Nurseryman, October 15.

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plete absence of prickles on its stems and canes, difficult to find even with systematic search; by the form of the individual buds particularly adapted to use for corsages; by the elusive fragrance of the flowers, very strong at times for polyanthas and at other times only moderate, and by the relatively small but abundant foliage, glossy and somewhat leathery, with more than average resistance to mildew.

No. 894. Rose plant. Herbert C. Swim, Ontario, Calif., assignor to Armstrong Nurseries, Inc., Ontario, Calif. A new and distinct variety of rose plant characterized as to novelty by its free branching and floriferousness; by its abundant medium to large, heavy, leathery and glossy foliage; by its semidouble flower with an average of seventeen to twenty-one petals of unique and brilliant color, and by its habit of flowering in clusters but on relatively long individual stems, adapting it to cut flower purposes and garden decoration.

No. 895. Rose plant. Herbert C. Swim, Ontario, Calif., assignor to Armstrong Nurseries, Inc., Ontario, Calif. A new and distinct variety of rose plant, characterized as to novelty by its habit of moderate growth and production of heavy, short to medium-length stems with a tendency to continuity in production of flowers; by its large-size foliage of leathery, glossy texture and appearance and typically bright green shade; by the color of its flowers, new in hybrid teas and unique in neatness and balance throughout their life cycle, and by the tendency of the flowers to fade uniformly, with a minimum of objectionable blue coloring under heat and sunlight.

No. 896. Rose plant. Herbert C. Swim, Ontario, Calif., assignor to Armstrong Nurseries, Inc., Ontario, Calif. A new and distinct variety of rose plant, characterized as to novelty by its tall, upright and free-branching habit of growth, producing long stems with usually but a single flower to a stem; by the red color of the flowers with petals of heavy substance; by the penetrating tea fragrance of its blooms; by the oval shape of its leaflets, and by the small number of thorns.

No. 897. Rose plant. Herbert C. Swim, Ontario, Calif., assignor to Armstrong Nurseries, Inc., Ontario, Calif. A new and distinct variety of rose plant, characterized as to novelty by the exceptionally large size of the flowers for red roses; by the entirely new shade of red color in the bud and newly opened bloom and more particularly distinctive in the class of double roses; by the exceptional length of the flower bud as the first petal opens and the unusual length of the peduncle, and by the exceptionally vigorous plant on which the flowers are produced singly on stems of greater than average length.

No. 898. Aechmea plant. Mulford B. Foster, Orlando, Fla. A new and distinct hybrid aechmea plant, characterized as to novelty by the distinctive glossy sheen and unusual red coloring of the leaves, with this color equally brilliant on both sides of the leaves; by its strong resistance to scale or other insect infestations, and by its ability to thrive with a minimum of watering, as it retains water in its leaf cups from only occasional waterings.

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